

# DEVELOP YOUR RÉSUMÉ & REFERENCES

**Add job goals to skills assessment—include work-related and academic experiences and extra activities.**

The process of developing a résumé is an extension of your self-assessment. Unless you have thoroughly and honestly determined what your skills are and identified specific situations in which you have either developed or successfully used your skills, your résumé will not be distinctive or effective. Keep in mind that résumé writing is not rocket science (!), but neither is it simple. It requires careful thought, attention to detail, and understanding of purpose. Prior to working on résumé specifics, please keep in mind the following important ground rules:

## 11 Résumé Basics

- 1. Be concise.** Résumé length depends on your skills and experience. You may need more than one page to effectively state your strengths but do not use space carelessly. Most undergraduates will develop a one-page résumé; MS students and alumni may require two, and PhD candidates, three pages or more when including publications, presentations and references.
- 2. Know your objective.** Your purpose in writing an effective résumé is to obtain an interview and to guide your interview discussion. Customize your résumé for the opportunity.
- 3. You cannot write a résumé in an hour or two.** Writing an effective résumé is time-consuming, requires planning, feedback, edits, and adjustments. In fact, a résumé is never “complete”; adjustments continually improve content and format.
- 4. Presentation matters.** Format or layout should be professional, consistent, and logical. Templates are strongly discouraged.
- 5. Be clear and concise.** Few will actually “read” your résumé; they will scan it. Only if it catches their attention and contains keywords, will they bother to read it. Key information such as degrees and titles should be easy to find. Information is arranged by importance.
- 6. Use keywords.** Employers search résumés for keywords. List every primary software tool, instrumentation, research method, and computer language. Read current job postings and employer websites to determine key skills currently sought after. Include buzzwords in your area of interest that match your search and skillset.
- 7. Spell check (with U.S. English version).** Don’t simply rely on MS Word’s spell-check function. After all, “software” and “soft wear” are both correct in the “eyes” of the computer.
- 8. Ask for feedback.** You may be a good engineer and researcher, but you are not an expert in résumé writing. ECS staff and others with experience in current employment practices should be consulted. Listen carefully and make wise decisions regarding the development of your résumé.
- 9. Think of résumés as advertisements.** There is a target audience and the most important and relevant information is emphasized. Relate this to résumé writing. Sparingly use bullets, boldface, italics to emphasize details. Generally, one form of highlighting a specific entry is sufficient. **Boldface**, CAPITAL LETTERS and *italics* are excessive.
- 10. Fifteen minutes of fame.** Any topic on your résumé welcomes a question. Can you talk about your academic project, ASME membership, computer skills or leadership role for 15 minutes? The résumé lists and describes events; the interview validates them. Think about the next step—the interview!
- 11. Do not pay anyone to develop your résumé.** They don’t know you. And, it costs too much.

### ECS TIPS

- ◆ **Do not simply list your degrees and jobs. Use what you learned in your skills assessment to fully develop each section of the résumé.**

## Your Contact Information

Beyond the basics of providing your name, email address, phone number, and mailing address, consider how this information will be used. Employers will contact you for a phone interview to determine your interest in their organization, to notify you of campus interview INVITED status, or to solicit more detailed information regarding your qualifications.

The information you provide must be both accurate and helpful. If you prefer to be known by a first name other than your given name, include this name in parentheses. Check messages several times a day during your job search. Update your out-going voicemail message with a professional greeting including your full name. Let your cell phone go to voice mail if the caller might be a recruiter and you are headed into class or somewhere noisy and inconvenient for a professional conversation.

### HOW TO WRITE IT

#### ECS TIPS

- ◆ **Be accurate and complete in providing specific contact information for employers. Keep in mind that they are working in a fast paced, business setting. Stay professional; check messages often.**

#### **Yijun (Yvonne) Wong**

U.S. Permanent Resident

1160 Engineering Drive, Madison, WI, 53706

Yywong2@wisc.edu

608.262.3471 (office)

608.274.7599 (home)



*Include preferred first name if different from given name. If you are often asked if you are an international student and are not, consider providing this information below name.*

#### **Erin J. Tachmeier**

##### **Campus**

1330 E. Gorham St., #9  
Madison, WI 53788  
608/123-4567

tachej@wisc.edu

##### **Permanent**

3900 Lake Cheyenne  
Port Mark, IL 60600  
846/123-4567



*Use @wisc.edu or @uwalumni.com.*

*Co-op/intern candidates include hometown address if looking for job near home.*

## Objective Statements

Your résumé objective statement is the single most important part of your résumé. It provides focus for the résumé. The rest of the résumé must support the objective by providing educational, academic, or real-world experiences related to the objective. A strong objective statement will:

1. Be employer-oriented (what you can do for employer), rather than self-oriented (what you want to gain)
2. Include specific functional areas of interest (based on your education and experiences)
3. State the type of opportunity sought:  
Co-op, Intern, Entry-Level (professional)
4. Not be too specific or too broad in scope
5. Tailor to the position as much as possible including employer name, job title, location, etc.

### ECS TIPS

- ◆ The objective statement serves as the “thesis sentence” of your résumé. The rest of your résumé supports your objective with academic projects, co-ops or internships, research areas, and leadership experiences.
- ◆ Be employer-oriented, rather than self-oriented.
- ◆ See page 11 for Key Words and Action Verbs.

### HOW TO WRITE IT ~~HOW NOT TO WRITE IT~~

~~Geological engineering co-op opportunity in water resources management or remediation for 2 to 3 work terms.~~

~~Intern position in a structural engineering design firm. Seek broad responsibilities in wood, steel, reinforced concrete and/or pre-stressed concrete design of buildings and/or bridges.~~

~~Electrical engineering position, preferably in automation/control systems or digital/analog circuit design where I can apply and enhance my technical skills.~~

~~To utilize problem-solving skills in the visualization and application of concepts in the design of diesel engines to reduce emissions and decrease fuel consumption. Seek entry-level position.~~

~~To obtain a team-oriented position performing dynamic analysis of large structures or failure analysis in a dynamic environment within a high-tech, cutting-edge organization.~~

 **Justify use of every word. Use key words. Eliminate phrases that add no value.**

## Functional Areas

Within the objective statement it is important to include 2–3 specific functional areas of interest (based on your education and experiences). Only if you are willing to significantly limit your employment opportunities should you list only one specific interest or engineering functional area. PhD candidates can sometimes justify this focused job search. Most BS and MS students and alumni, however, will have a broader area of interest to maximize job opportunities. Use the examples above to add special interest areas to your objective statement.

Consult past and present postings for similar jobs, and your departmental website, both of which list specific focus areas of study for proper phrasing of technical interest areas. (See Key Words and Action Verbs on page 11.)

### Major engineering functional areas:

**These functional areas are common to various branches of engineering, academics and industries worldwide.**

- ◆ Research
- ◆ Development
- ◆ Design
- ◆ Construction
- ◆ Production
- ◆ Operations
- ◆ Management

## ECS TIPS

- ◆ Identify the degree and level (i.e., BS Chemical Engineering), expected degree date, institution and GPA.
- ◆ The official name of the school is University of Wisconsin-Madison.
- ◆ Also list study abroad experiences.
- ◆ Possibly include brief descriptions of class academic projects, “selected” course listings, scholarships and other honors.

## Education Section

In this section, include post-secondary degrees earned or in progress in reverse chronological order. Format the section to be consistent with your next section, “Experience.” Include other degrees.

Freshmen and sophomores may include relevant high school information such as class ranking.

Provide overall GPA; major GPA should be included if significantly higher than overall GPA.

Include academic projects (with brief descriptions), significant coursework, academic honors and senior projects in this section if you do not have related work experience or if they are directly linked to your objective.

## HOW TO WRITE IT

### Education **University of Wisconsin–Madison**

B.S. Mechanical Engineering, expected May 20XX

- Major GPA 3.2/4.0 Overall GPA 2.9/4.0

### Academic Design Projects

- Turf Smurf: Designed and fabricated a device that simulated golf cart wear on various grasses for a turf grass company as a member of an interdisciplinary team.
- Rowing Exercise Machine Modification: Worked with corporate customer to design, fabricate and implement a universal rowing machine usable by people with multiple sclerosis, cerebral palsy, and paraplegics. Developed prototype and presented project to group.



**PhDs: Limit Education section to degree, date expected, and advisor and thesis topic. List research and teaching assistantships in Experience section.**



**If little or no work experience: List and describe academic projects. Possibly include projects outside major to illustrate qualifications and/or interest areas. Use unique course work listings for this purpose, also.**

### Selected Course Work

- Advanced Graphic Analysis, Materials Selection, Manufacturing Processes, Energy Systems Laboratory, Electronic Circuits and Power Conversion, Construction Project Management

—OR—

### Education **BS Industrial Engineering**, expected May 20XX

University of Wisconsin–Madison

- First semester transfer student

### Pre-engineering, 20XX–XX

University of Wisconsin–Milwaukee

- GPA 3.6/4.0
- Dean’s List 3/4 semesters
- Algoma Alumni Scholarship
- Wisconsin Regents Scholar

## Experience Section

The content of your experience section is critical and more flexible than you may think. You may include experiences that are related or unrelated (to engineering), as well as paid or unpaid.

Related engineering work, including co-op or intern experiences, should be listed first. Use phrases describing the skills developed or used, projects on which you worked, and results or goals met or exceeded.

Significant academic projects might be included in the Experience section (rather than Education) to call more attention and allow more space for complete description, especially if you do not have co-op or internship experience. You may include teaching and research positions, volunteer, and leadership experiences.

Include keywords in describing your work. Be quantitative whenever possible, such as “reduced processing time by 10%” or “managed \$1M design project.” Include skills developed, awards won, and results achieved. In most cases, you’ll list your experiences in reverse chronological order. It is optional to deviate from this guideline to emphasize unique experiences. If, for instance, you last worked as a summer landscaping assistant while the previous semester you were an engineering intern, break the Experience section into two: Engineering Experience and Additional Experience, so you can list the internship first.

### ECS TIPS

- ◆ **Obvious experiences include paid engineering work—although not all students have this kind of experience.**
- ◆ **Include academic projects here (if not included in Education). Describe them as if they were work experience. Research projects are experience.**
- ◆ **Include non-related work—emphasize skills rather than duties.**

## HOW TO WRITE IT

### EXPERIENCE

**Kohler Co.**, Kohler, WI

**Co-op Engineer**, May 20XX–January 20XX

- Developed and fabricated acoustic scanning robot. Monitored exhaust emissions. Worked with team of multidisciplinary engineers in sound power analysis. Co-presented final project to management.

**Bob-O-Link Golf Course & Country Club**, Highland Park, IL

Caddie, Summers 20XX–20XX

- Developed strong interpersonal skills in working with customers and management.
- Enhanced strong work ethic by working 12-hour days for three months each summer.
- Saved \$9,000 over four summers.
- Promoted to caddy master in 20XX.
- Trained and supervised new hires.

—OR—

### ENGINEERING EXPERIENCE

**Engine Research Center (ERC)**, University of Wisconsin–Madison

Research Associate, September 20XX–present

- Developed a finite element based program, HCC, for prediction of I.C. engine component temperatures.
- Incorporated a Discrete Ordinates Method radiation model into the CFD code, KIVA.
- Served as technical contact between ERC and Diesel Combustion Collaboratory.

**Atmospheric & Oceanographic Science**, University of Wisconsin–Madison

Engineering Consultant, December 20XX–present

- Rewrote the atmospheric weather prediction program, NHS, to run on a massively parallel scale.

**AVL List**, Grax, Austria

Engineering Intern, June–August 20XX

- Incorporated ERC’s chemistry models into AVL’s primary computational fluid dynamics (CFD) modeling codes.

## HOW TO WRITE IT

- Updated drawings in ProEngineer. Entered and verified data for SAP upgrade. Entered and obtained data for-online catalog. Served as German translator.
- Developed code to extrapolate 3-D data from 2-D paraboloid model for wall-shear rate measurements in the carotid artery.
- Analyzed corporate quality system to conform to new norm–ISO 9000 (Vision 2000).
- Completed critical analysis of operational and management processes at three MTS production locations in Italy.
- Managed operations on \$2M family grain farm.
- Acquired invaluable mechanical aptitude as a result of continuously scheduled and unscheduled maintenance of large farm equipment.
- Measured the modulus of elasticity, shear modulus, mechanical damping in bending and torsion, specific gravity and moisture content of toothpick-sized specimens.
- Led weekly meetings (of 8) to facilitate continued discussion, problem solving and completion of research.
- Enhanced experience with various instrumentation tools, including digital oscilloscope, microscope, lock-in amplifier, split diode laser and light detector.
- Designed a strategic drain mechanism in Pro-E.
- Designed an Excel Macro using Visual Basic to convert raw leak test data into usable charts and tables.
- Performed daily testing and implemented adjustments to ensure optimal equipment operation. Helped determine sources of contamination during operation.
- Developed vehicle concepts for an entry-level drag and circle track race team. Overhauled and modified race engines, design with mechanical principles learned in college.
- Developed a power train for a 12-second per mile drag car. Requires physical application of theoretical concepts.
- Maintained, troubleshot and repaired various machines such as heart-lung, ventilators, gamma knife, X-ray, pacemaker, defibrillators, blood cell counters, laboratory machines, viewing wand and others.



***Use descriptive phrases to emphasize “what” you did and “how” you did it. Use action verbs and keywords, as well as quantify the scope of a project (use #, %, or \$).***



***Deliberately write your résumé so that key words will be found by the employer through visual or electronic scans.***

## Key Words—For Objective Statement and All Résumé Sections

alloys	estimation theory	photonics
applied mathematics	fission	plasma physics
applied solid mechanics	fluid mechanics	polymer processing
automation	geomechanics	powertrain systems
bioinformatics	geometric modeling	process control and design
biomaterials	GIS	product design
bioMEMS	health care/medical informatics	radiation science
biosignals	HVAC	radiation transport
CAD/CAM	IC engines	radiobiological
catalysis	information systems	rehabilitation equipment
composites	interfacial science	rheology
computational mechanics	kinematics	robotics and computer imaging
computer-integrated manufacturing	LIS	sensor physics
cryogenics	machine design	solar energy
design automation	mechatronics	solid modeling
diagnostic spectroscopy	medical imaging	superconductors
direct numerical simulations	microanalysis	thermal hydraulics
emissions management	motion control physical modeling	tissue engineering
ergonomics	nanomechanics	water resources
	nuclear power	

## Action Verbs<sup>1</sup>

Use consistent verb tense (generally past tense). Start phrases with descriptive action verbs. Supply quantitative data whenever possible. Adapt terminology to include key words. Incorporate action verbs with keywords and current “hot” topics, programs, tools, testing terms, and instrumentation to develop concise, yet highly descriptive phrases. Remember that résumés are scanned for such words, so do everything possible to incorporate important phraseology and current keywords into your résumé.

achieved	delivered	founded	motivated	resolved
adapted	detailed	gathered	navigated	responded
analyzed	detected	generated	operated	restored
arbitrated	determined	guided	perceived	retrieved
ascertained	devised	hypothesized	persuaded	reviewed
assessed	diagnosed	identified	piloted	risked
attained	discovered	illustrated	predicted	scheduled
audited	displayed	implemented	problem-solved	selected
built	dissected	improvised	proofread	served
collected	distributed	influenced	projected	shaped
conceptualized	diverted	initiated	promoted	summarized
compiled	eliminated	innovated	publicized	supplied
computed	enforced	inspired	purchased	surveyed
conducted	established	installed	reasoned	synthesized
conserved	evaluated	integrated	recommended	taught
consolidated	examined	investigated	referred	tested
constructed	expanded	maintained	rehabilitated	transcribed
consulted	experimented	mediated	rendered	trouble-shot
controlled	expressed	mentored	reported	tutored
counseled	extracted	modeled	represented	unified
created	formulated	monitored	researched	wrote

## Other Résumé Section Headers

While the previously mentioned résumé sections—Contact Information, Objective Statement, Education and Experience—are expected on your résumé, other relevant information should be included as well. The following section headings illustrate some of the available options: Honors & Awards, Scholarships, Memberships, Patents, Research Interests, Teaching Interests, Publications, Presentations, Interests, Volunteer Activities.

### HOW TO WRITE IT

#### Leadership

#### S.U.B.E. (Society Uniting Business and Engineering)

- Vice President
- Worked closely with Industrial Advisory Board to organize events.
- Developed funding proposals and designed marketing strategies for organization.

#### Computer Skills

C++, HTML, Java, Visual Basic, Adobe InDesign, Adobe Photoshop, Microsoft Word, Excel, Access, Project, Dreamweaver, Maple, Matlab, Promodel, R, XLISPSTAT, SPSS, MOST, PIMS

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#### Skills

*Global Languages*      Fluent in Cantonese: Basic understanding of Mandarin

*Computer Languages*      C++, Java, Python, SQL

*Computer Programs*      PRO-II, CapCost, Windows, MS Office

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#### PUBLICATIONS

**R.M. Jones** and M.D. Graham, “Macromolecules in Microdevices: Multiscale Simulation of DNA Dynamics in Model Microfluidic Geometries”, submitted for publication.

**R.M. Jones** and M.D. Graham, “Macromolecules in Microdevices: Multiscale, Simulation of DNA Dynamics in Model Microfluidic Geometries,” Technical Proceedings of the 2005, International Conference on Modeling and Simulation of Microsystems.

**R.M. Jones** and M.D. Graham, “Stochastic simulations of DNA in Flow: Dynamics and the Effects of Hydrodynamic Interactions,” Submitted to J. Chemical Physics.

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## PRESENTATIONS

R.M. Jones (speaker), J.J. de Pablo, and M.D. Graham, “Macromolecules in Microdevices: Multiscale Simulation of DNA Dynamics in Model Microfluidic Geometries,” to be presented at the Fifth International Conference on Modeling and Simulation of Microsystems (20XX), San Juan Puerto Rico, USA

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### Languages

- Chinese (Mandarin), native
- French, fluent
- Italian, basic

➔ **Include language proficiency**

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### Cultural Diversity *or* Global Profile

- Lived and studied in France; Extensive western European travel
- Experienced in working in diverse environments

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### Work Authorization

Contact the International Student Services Office regarding employment regulations, Curricular Practical Training (CPT) and Optional Practical Training (OPT) ([www.iss.wisc.edu/](http://www.iss.wisc.edu/), 608/262–2044).

If you are studying in the U.S. on a student visa or other temporary visa, it is important that you understand your employment privileges and restrictions. Additional information can be found on the U.S. Department of State website ([travel.state.gov](http://travel.state.gov)).