

## Resume Tips for Engineering Majors

Employers are seeking candidates who have the skills, knowledge, and experience that match the job. Help them see that you are a good fit by keeping your resume focused, descriptive, and interesting, and make sure that you **customize it for each opportunity**. You can customize by changing the Summary, emphasizing certain skills, and/or by moving sections around depending on what is most important to the employer.

### CONTACT INFORMATION

Include your name in a larger bold font (24+ pt). Underneath your name, using as few lines as possible, add your location, telephone number, email, and your LinkedIn URL if you have one. If you are relocating, do not include your current location as employers may think you do not want to relocate. Street address is not necessary.

#### Brian Jones

brian.jones@gmail.com | www.linkedin.com/in/brianjones | 503.249.8874 | Portland OR

### SUMMARY or HEADLINE

Communicate both *what* you are seeking and a few of your *key strengths* related to the position you are seeking. Most employers see Objectives as outdated, so try a Summary instead (but include a mention of the position you're seeking). A Qualifications Summary with a few bullet points is great for those with more experience.

#### Summary

Renewable Energy Engineering junior at Oregon Tech with coursework in X and Y (related to job you're applying to) and experience in Z (project or work experience, again related to specific job).

-OR-

#### Power Engineering Internship Candidate

### EDUCATION

List your education next. Include minor, specialization, emphasis or area of interest, and your GPA if it's a strength. Are you a student athlete or member of a club? Are you EIT (Engineer-In-Training) certified? Did you receive a scholarship?

**NOTE:** employers tell us that if they have a GPA requirement (becoming more common) and you do NOT have a GPA on your resume, you will not be considered. It's safest to include your GPA if it's 3.0 or higher.

#### EDUCATION

Oregon Institute of Technology (Oregon Tech), Wilsonville OR

**Bachelor of Science in Mechanical Engineering**

June 2018

GPA: 3.4 Major GPA: 3.7 Dean's List – two quarters

Transfer coursework and degrees are optional. Only include if it adds additional information that strengthens your application by showcasing additional skills, for example an AS in Business or prior BS in Communications.

### SKILLS

Whatever skills you list, have *examples* of how you've used those skills in your Projects or Experience.

#### SKILLS

*Programming:* Java, C/C++, Visual Basic, Mathematica, HTML, MathML, JavaScript, SQL

*Applications:* LTSpice, MATLAB, Photoshop, Illustrator, PageMaker, Excel, PowerPoint

*Operating Systems:* Windows, Unix, Solaris, Linux, DOS

*Language:* Proficient in Spanish

-OR-

## SKILLS AND ABILITIES

### TECHNICAL SKILLS

- **CAD and other software:** Matlab, LTSpice, SolidWorks, Python, OSLO
- **Electromechanical Energy Conversion** – AC/DC machines, power switching, control circuits
- **Electric Power Conversion** – inverters, converters (SEPIC/BUK/flyback), microcontrollers
- **Energy Storage** - Energy Storage for Developing Countries, Fuel Cells, Batteries
- **Technical Writing** – Lab Reports in IEEE format, technical proposals, and informative memos
- **Tools** - Oscilloscopes and digital multimeters
- **Diagram Interpretation:** schematics, mechanical and block diagrams, parts lists, and technical materials
- **Productivity** - Microsoft Office Suite (Excel, Word, PowerPoint)

### PROFESSIONAL SKILLS

- **Presentations** - to different stakeholders in varying environments
- **Project Leadership** - multiple class projects
- **Teamwork** - multiple experiences in small and large teams

## PROJECTS / RESEARCH – very important!

Particularly for those embarking on a new engineering career, projects are a very important way to show your **applied knowledge**. Include all related projects, including those you have done on your own.

Working on a **senior project** is a huge commitment and a considerable accomplishment. You should have as much about this on your resume as you do about work experiences. You may include it in separate Projects section, or you may put it in your Experience section, since it is so similar to what you might accomplish in a work setting. Other less significant projects would be included in a Projects section.

Employers place a high value on **team projects**. In industry, you will need to interact effectively with other engineers, vendors, contractors, and support staff. Indicating projects in which you are a contributing member of a team reflects valued and needed skills.

You may also include **personal projects** – rebuilding a car, building a drone, anything that shows your technical and problem-solving expertise. Below are just two examples:

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### TECHNICAL PROJECTS – Oregon Tech

#### Circuit Design Project

- Designed and built operational amplifier utilizing oscilloscopes, digital multimeters, and integrated circuits.
- Tested input and output of different stages for desired specifications.

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#### TECHNICAL TEAM PROJECT – Oregon Tech Formula SAE

06/2018-06/2019

Designed suspension and chassis components for Formula SAE car. Calculated and simulated torsional, bending stiffness, stresses, strains and displacements under different loading conditions.

- Analyzed 1D, 2D and 3D elements on concentrated loads with spot-weld, seam-weld and no weld conditions
- Tested global modes of vibration for aluminum space frame of Ford Focus and carried out modal analysis to increase the first natural frequency by 1 Hz.
- Provided design alternatives such as adding cross member, rigid support, increasing thickness of elements etc. to increase stiffness and first natural frequency.
- Determined and improved torsional and bending stiffness each by 5% using modal analysis.
- Validated results using static, modal analysis and verified them by comparing with hand calculations.

*Tools Used: UG NX, Hypermesh, Abaqus*

## EXPERIENCE

Use short, descriptive bullet points that begin with action verbs e.g., (designed, improved) and highlight responsibilities, skills, and accomplishments. Explain how your work added value to the company and quantify results whenever possible. You can highlight either the position or the company, whichever is more important. When applicable, **start with the win**, followed by how you achieved this accomplishment.

### ENGINEERING EXPERIENCE

**Civil Engineering Intern, City of Medford, Medford OR**

Summer 2018

- Re-designed an intersection to improve safety, aesthetics, and connectivity as part of a 5-person team
- Determined Level of Service for the existing intersection, roundabout option, and optimized signal times for final updated signalized design using VISSIM
- Created a traffic control plan to manage construction work including restriping, removing islands, updating traffic signals and repaving with 5 sets of conflicting movements using Civil 3D

-OR-

Lambert Dental Instrument Manufacturer, Medford OR

**Data Analyst/Industrial Engineering Intern**

Summer 2017

- Contributed to a team of 5 working on an inventory auto-replenishment project
- Decreased time-to-customer by 10% by designing improved dock-to-stock layout and process
- Increased purchasing efficiency by developing an electronic quote sheet using Excel macros

Experience less related to engineering may still convey many positive aspects of you as a candidate to employers. Whatever experience you have that conveys your strengths, include it in sections such as **Additional Experience** or **Military Service**.

## INVOLVEMENT/AFFILIATIONS

Include any involvement in student clubs, professional organizations, and community activities. Be sure to highlight leadership roles or positions of responsibility. If extensive, include a separate section. If less extensive and all related to Oregon Tech, you may include in your Education section.

### Leadership and Involvement

Society of Women Engineers (SWE), Treasurer

2017-2018

American Society of Civil Engineers (ASCE), Student Member

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## General Resume Tips

NEVER use a template! The embedded tables and macros will not play well with applicant tracking systems. A plain Word document with simple formatting is best.

- **Don't put your contact information in a header:** applicant tracking systems won't be able to see it.
- Be organized and **use consistent formatting.** Periods after all bullets, or none.
- **Quantify your experiences when possible:** Provided tech support to user network of 1,000+ employees.
- Balance your use of text, bullets, blank space and margins.
- Begin all bullets with **action verbs**; past tense verbs for past accomplishments.
- Do not use I, me, my (they are understood). You may be more personal in your LinkedIn Summary.
- **Do not include references** or "References on request" – it's assumed.
- Within each section, use reverse chronological format.
- **Two pages is totally acceptable** if you can take up at least one-third of page 2. Leave plenty of white space so that readers can skim your information.
- Use **boldface** and *italics* selectively to highlight important information; avoid underlining.

**NO typos** – get someone else to proofread for you

# Levi Lorenz

(805) 555-1234

www.linkedin.com/in/levilorenz

levi.lorenz@gmail.com

## SUMMARY OF QUALIFICATIONS

- Engineering work experience in a high-tech manufacturing environment
- Experience with the design, installation, and improvement of industrial systems that integrate people, technology, materials, and information
- Extensive hands-on project work involving efficiency, work design and measurement, industrial costs and controls, data management and system design, ergonomics, statistics and operations research
- Experience with customer service, sales techniques, and interpersonal social skills

## EDUCATION

Oregon Institute of Technology (Oregon Tech), Wilsonville OR

**Bachelor of Science in Manufacturing Engineering Technology**

June 2019

Major GPA: 3.6 Overall GPA: 3.4 Dean's List – 4 quarters

## TECHNICAL SKILLS

Advanced proficiency in Microsoft Access: Created a database for production systems.

Proficient in CAD/CAM; Microsoft Excel, Word, PowerPoint; Minitab

Coursework in Automation and Robotics in Manufacturing, Lean Manufacturing, Plant Layout and Handling Systems, Plastic Manufacturing Processes, Thermal Systems for Manufacturing

## INDUSTRIAL ENGINEERING EXPERIENCE

Northwest Paper Box Manufacturers, Portland OR

**Industrial and Manufacturing Engineering Co-op**

06/18-12/18

- Designed and implemented a new mixed-model assembly line to accommodate a new product.
- Reorganized inventory system to prevent material shortages while minimizing on-hand inventory.
- Gave several presentations to upper management, supervisors, and team members.

## SENIOR PROJECT – Oregon Tech

Developing a Decision Support System Software tool using Microsoft Excel and Access to create a small-scale ERP system. The software will have an MRP engine, which will be integrated with financial analysis of customer orders, supply chain costs, direct labor costs, inventory costs and overhead costs.

## TECHNICAL GROUP PROJECTS – Oregon Tech

- Developed alternative layouts for C&D Aerospace's Dado Assembly Area while optimizing man hours and material flow.
- Created Material Requirements Planning Program for three product structures containing parts with independent and dependent demand.
- Used Operations Research techniques to determine the best combination of foods to include in a Meal Ready to Eat (MRE).
- Redesigned an alarm clock to be more ergonomically correct.

## LEADERSHIP / INVOLVEMENT

Vice-President, Alpha Pi Mu - Industrial Engineering Honor Society

06/18-06/19

Member, Institute of Industrial Engineers (IIE)

09/17-06/19

## ADDITIONAL WORK EXPERIENCE

Server, The Highcliffe, Oregon City OR

1/16-12/17

- Worked 20-25 hours per week while attending school full-time