Paul Lee

U.S. Citizen ✉ *Paullee11760@gmail.com*

Education

2021–2024 **M.S. Computer Science** - *Georgia Institute of Technology*

2014–2018 **B.S. Mechanical Engineering Honors** - *University of Texas at Austin*
GPA: 3.92/4.0

Experience

Sep 2019–Present **Altect, Inc.** - *Vice President of Engineering* Austin, TX

- Lead engineer in developing innovative safety solutions for renewable energy storage systems.
- Assemble experimental setups from scratch, develop mechanical model simulations, and communicate with third party resources.
- Set up company communication & project management platforms via Confluence, JIRA, and Slack.

Sep 2019–Jul 2020 **UT Fire Research** - *Research Engineer* Austin, TX

- Developed a surrogate battery energy storage system that releases safe non-flammable gases similar to that of a rack-level failure.
- Created an array of custom wireless sensors tuned to detect the dissemination of the safe non-flammable gas.
- Participated in field studies with the Honolulu Fire Department and the Phoenix Fire Department to align research with industry.

Jun 2018–Jul 2019 **Tesla, Inc.** - *Quality Data Science & Systems* Sparks, NV

- Was in transit for a formal position as an Associate Data Scientist.
- Developed micro-web applications in Python Flask to promote efficient communication of critical information.
- Analyzed quality metrics in compliance with Tesla's Quality Management System.
- Utilized Confluence REST API's to autonomously maintain information.

Jun 2018–Jun 2019 **Tesla, Inc.** - *Quality Technician II* Sparks, NV

- Worked extensively with programming languages, such as Python, Java, and MySQL to identify the causes of defects through data analysis, while simultaneously working to develop and implement improved processes.
- Maximized efficiency and quality in accordance with the company's standards by utilizing root-cause analysis and lean manufacturing methodologies in the Model 3 battery module production.
- Updated design specifications from experimental testing results.
- Developed a certification process for production associates.

Achievements

- Quality Technician of the Quarter - Gigafactory 1 Q3 2018
- Successfully saved the company $10.5M in the third and fourth quarters of 2018 by coordinating with an engineering team and senior managers to develop and implement an innovative project
- Leveraged Java, Python, and MySQL to develop stand-alone executables as serviceable quality tools

Feb 2017–May 2018 **UT Fire Research** - *Undergraduate Research Assistant* Austin, TX

- Led a team of undergraduate students, providing mentorship and coaching where needed
- Contributed to research for the automation of a testing facility that simulated indoor flashover fires
- Conducted comprehensive research into the causes of battery failure and controlled systems automation

Mar 2016–Dec 2016 **Applied Research Laboratories** - *Student Intern* Austin, TX

- Expedited the full-cycle of system development, designing, commissioning, fabricating, and assembly of experimental test systems according to exact specifications by utilizing an extensive knowledge of CAD software.
- Developed new parts and modified existing parts in PTC Creo CAD software to enhance functionality.
- Created accurate engineering drawings by leveraging Geometric Dimensioning and Tolerancing practices.

Projects

Fall 2019–Present **Personal Website in ReactJS** - *Eellaup.com* Austin, TX

- Developed the front and back-end of my personal website with HTML & CSS in a ReactJS environment.
- Website serves as a public portfolio for my hobbies, projects, and interests.

Fall 2017–Spring 2018 **Honors Thesis** - *Safety Risks with DIY Electric Rideables* Austin, TX

- Investigated various battery failure methods and their relation to electric rideables under normal operational conditions.
- Characterized operating conditions (temperature, voltage, current, elevation, etc.) of my skateboard under normal use.

Fall 2017 **Urban Search and Rescue (USAR) Robot** - *Senior Design* Austin, TX

- Created a high temperature-resistant autonomous robot that efficiently searched for a "pet" in a smoke-filled room.
- Utilized established principles to develop a strong methodological approach in creating an effective design.

Summer 2016 **Homemade Electric Skateboard** Austin, TX

- Designed and created a homemade electric skateboard. Project included 3D modeling and FDM manufacture of custom parts along with machining, woodworking, electrical layout, and soldering.

Skills

Mechanical Design: SolidWorks (CAD), PTC Creo, FEA Analysis, GD&T Methodology (Basic), FMEA, Stress/Strain & Thermal Simulations, Machine Shop Certified

Software & Languages: Java, Python, MySQL, ReactJS, LaTeX, LabVIEW, MATLAB, Microcontrollers, Raspberry Pi, Arduino, JIRA, Confluence, HTML/CSS, Flask (Micro Web Framework), Microsoft Office

Manufacturing: Prototyping, 3D Printing, PFMEA, Quality Control Plan, Root-Cause Analysis, Othermill Pro (Desktop CNC)

Electrical Systems Design: Data Acquisition, National Instruments, Soldering, EagleCAD (PCB Design), Cirqoid

Licenses and Certifications

Nov 2018 **Engineering-In-Training** - *Texas Board of Professional Engineers*
- EIT #64856

Honors and Awards

Fall 2017 Huckin-Liedtke-Lupton Endowed Presidential Scholarship
Fall 2017 John M. Scott Endowed Presidential Scholarship in M.E.
Fall 2016 Wagner Schwing Endowed Presidential Scholarship in Engineering
Spring 2016 Distinction of Engineering Scholar - Top 5% of class
Fall 2015 Amocco UT Alumni Endowed Scholarship in Engineering

Courses

UT Austin

- ME379M: Theory/Design of Mechanical Measurements
- CS312: Introduction to Programming (Java)
- ME318M: Engineering Computational Methods
- ME344: Dynamic Systems & Controls
- ME348C: Mechatronics I
- ME339: Heat Transfer
- ME330: Fluid Mechanics
- ME338: Machine Elements
- ME324: Dynamics
- EM306: Statics
- M340L: Linear Algebra
- ME335: Engineering Statistics
- ME348D: Mechatronics II
- ME340: Mechatronics (Undergrad)
- ME679: Undergraduate Honors Thesis
- ME334: Materials Engineering
- EM319: Mechanics of Solids
- ME326: Thermodynamics
- M427J: Differential Equations
- ME353: Engineering Finance

Udemy

- Python for Data Structures, Algorithms, and Interviews
- Modern React with Redux [2019 Update]
- React - Ordering with Hooks and Firebase
- Python for Data Analysis & Machine Learning Bootcamp

Interests

- Stock Trading
- Snowboarding
- Eating
- Tennis
- Bowling
- Hiking

Declaration

I hereby declare that the above mentioned information is correct up to my knowledge and I bear the responsibility for the correctness of the above mentioned particular.

Date: September 23, 2020

Place: Austin, TX

Paul Lee