

Cohen Chambers

Modeling Engineer Intern

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STRENGTHS

- Innovative Thinking**
Proposed design strategies based on theoretical insights, turning abstract ideas into functional concepts shaped for real-world use.
- Collaboration Skills**
Partnered with a diverse team of engineers to promote synergy, resulting in improved project delivery and richer idea generation.
- Data Analysis Expertise**
Applied rigorous data validation processes, enhancing precision of derived insights and their importance in guiding product improvements.
- Creative Problem-Solving**
Utilized unique analytical perspectives, establishing effective problem resolution pathways tailored to complex engineering challenges.
- Effective Communication**
Regularly shared updates and technical insights during team meetings, nurturing transparency and an open environment that promotes feedback.

SKILLS

<u>FEM Analysis</u>	<u>MATLAB</u>	<u>Python</u>
<u>Data Analysis</u>	<u>Device Modeling</u>	
<u>Statistical Analysis</u>		
<u>Team Collaboration</u>		
<u>Acoustic Theory</u>		
<u>Design Optimization</u>		
<u>Statistical Tools</u>		
<u>Data Management</u>		

SUMMARY

As a current PhD student specializing in engineering, extensive hands-on experience in device modeling and data analysis has been cultivated through challenging academic projects. Competence in FEM tools such as COMSOL, combined with a solid foundation in MATLAB and Python for programming, powers innovative design developments in piezoelectric applications. Skills in statistical analysis support informed decision-making and experimental improvements. Collaboration within cross-functional teams continues to enhance project effectiveness, showcasing the ability to propel technology development forward, particularly through focused efforts on state-of-the-art bulk acoustic resonators (BAW). Eager to contribute knowledge towards impactful advancements in a dynamic team-based environment.

EDUCATION

PhD in Engineering

University of Engineering 🎓 GPA: 4.0 📅 2027 📍 Los Angeles, CA

Coursework: Device Modeling, Data Analysis, Statistical Techniques, FEM Analysis

TECHNICAL SKILLS

- FEM Tools:** COMSOL, ANSYS, Abaqus
- Programming Languages:** MATLAB, Python, C++
- Data Analysis Platforms:** R, Excel, Tableau
- Simulation Software:** COMSOL Multiphysics, PSpice, SPICE
- Statistical Techniques:** Regression Analysis, Machine Learning, Data Mining
- Database Management:** MySQL, SQLite, Microsoft Access
- Research Methodologies:** Literature Reviews, Experimental Design, Data Collection
- Project Management Tools:** Trello, Asana, JIRA
- Version Control Systems:** Git, Subversion, Mercurial
- Collaboration Tools:** Microsoft Teams, Slack, Zoom

EXPERIENCE

Modeling Engineer Intern

University Research Lab 📅 January 2026 - Present 📍 Los Angeles, CA

Serves as a Modeling Engineer Intern focusing on developing advanced modeling techniques applicable to device performance evaluation in piezoelectric technology. In this capacity, there is significant exposure to cross-disciplinary collaboration, particularly with circuit design and layout engineers across multiple key projects.

- Constructed FEM models simulating behaviors of piezoelectric resonators, demonstrating enhancements in understanding and predicting device performance.
- Collaborated closely with circuit design engineers to develop integrated models, significantly improving accuracy of prototypes during testing phases.
- Analyzed detailed experimental data on device parameters that resulted in actionable insights, leading to considerable improvements in overall design efficiency.
- Proposed and implemented design modifications utilizing physics-based models, pushing boundaries of traditional methodologies to improve device functionality.
- Leveraged MATLAB for cleansing datasets, ensuring high data integrity thus enabling reliable further analyses and experiments.
- Engaged actively in weekly cross-team consultations to share progress updates and insights, reinforcing a culture of collaborative innovation.

Research Methods

Experimental Design

Simulation Techniques

Project Management

LANGUAGES

English Native

Spanish Proficient

MY CAREER



● Modeling Engineer Intern at University Research Lab (7 Months)

● Capstone Project Developer at University of Engineering (3 Months)

● Research Assistant at Academic Research (2 Months)

Capstone Project Developer

University of Engineering 📅 September 2025 - December 2025 📍 Los Angeles, CA

Oversaw a pivotal project designed to create a novel BAW device applying advanced modeling technologies. This leadership role involved strategic planning and execution, delivering practical solutions while adhering to compressed timelines.

- Spearheaded a multidisciplinary team crafting a new approach to BAW device design integrating cutting-edge modeling techniques.
- Authored an all-encompassing project blueprint detailing milestones that ensured timely delivery and completion of objectives.
- Employed COMSOL Multiphysics to generate simulations effectively depicting acoustic wave behaviors essential for performance evaluations.
- Conducted rigorous comparative analyses of alternative designs optimizing on critical performance indicators yet maintaining manufacturability factors.
- Presented comprehensive findings to both faculty and peers, garnering recognition for clarity, depth of research, and overall methodological rigor.
- Composed thorough documentation encapsulating project results and approaches, preparing it for potential future publication and academic dissemination.

Research Assistant

Academic Research 📅 June 2025 - August 2025 📍 Los Angeles, CA

Supported ongoing studies related to acoustic phenomena in materials relevant to BAW technologies. Engaged in diverse tasks ranging from data management to proactive participation in experimental setups.

- Contributed to research initiatives exploring acoustic wave dynamics, providing valuable support to advance broader studies in the field of piezoelectricity.
- Facilitated data collection procedures implementing enhanced statistical methods using Python to streamline processing tasks and analytical reporting.
- Collaborated extensively with established researchers to refine experimental design methodologies, fostering improved study outcomes.
- Pursued continuous literature reviews, confirming up-to-date familiarity with recent advancements in piezoelectric material science and applicability.
- Assisted in curating presentations geared for academic conferences, distinctly raising awareness of newly discovered methodologies.
- Developed a robust database management system supporting organized access to experimental datasets facilitating team members' productivity.

LEADERSHIP & AWARDS

- Dean's List, University of Engineering, 2024-2026
- Best Project Award, Engineering Symposium, 2025

CERTIFICATIONS

- Certified in COMSOL Multiphysics 📅 2026
- Python for Data Science - Coursera 📅 2026

PROFESSIONAL AFFILIATIONS

- Member, Engineering Student Association
- Volunteer, STEM Outreach Program

ADDITIONAL INFORMATION

Work Status : Authorized to work in United States. No sponsorship required.

REFERENCES

AVAILABLE ON REQUEST