

Cohen Chambers

Modeling Engineer Intern

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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

SKILLS

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|-----------------|------------------------|-----------------------|-------------------------|
| • FEM Analysis | • Device Modeling | • Design Optimization | • Experimental Design |
| • MATLAB | • Statistical Analysis | • Statistical Tools | • Simulation Techniques |
| • Python | • Team Collaboration | • Data Management | • Project Management |
| • Data Analysis | • Acoustic Theory | • Research Methods | |

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.

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

LANGUAGES

- English (Native)
- Spanish (Proficient)

ADDITIONAL INFORMATION

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

REFERENCES

AVAILABLE ON REQUEST