

Cohen Chambers

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

June 2025 - August 2025

Academic Research

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