

LAWRENCE WONG

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Education

Texas A&M University

Master of Science in Computer Science

• **Graduate Coursework GPA:** 4.00/4.00

Aug. 2026 – Expected Dec. 2027

College Station, Texas

Texas A&M University

Bachelor of Science in Computer Science

• **GPA & Awards:** 3.93/4.00, Summa Cum Laude, Undergraduate Research Scholar

Aug. 2022 – May 2026

College Station, Texas

Relevant Coursework: Artificial Intelligence, Computational Data Science, Cloud Computing, Deep Learning, Machine Learning, Natural Language Processing, Parallel Computing

Experience

OptiSigns Digital Signage

Data Engineering & Applied AI Intern

May 2025 – Aug. 2025

Houston, Texas

- * Integrated **GPT API** for industry classification, iteratively refining prompts, validating outputs, and implementing robust error-handling, while leveraging **Braintrust** to systematically evaluate model outputs and benchmark classification accuracy at **~85%**.
- * Engineered an automated **BigQuery** pipeline using a **Digital Ocean Droplet** to automate on-boarding new customer data, integrating webscraped data and SQL data to classify **~200** customers per day with a daily **CRON** job.
- * Delivered enriched datasets for **~30,000** old and new customers back into **BigQuery**, improving data accessibility and enabling downstream teams to perform analytics and make informed business decisions on classified data at scale.

Sketch Recognition Lab

Student Researcher

Aug. 2024 – Present

Bryan, Texas

- * Cleaned and resampled raw sensor data (accelerometer & gyrometer), employed sliding window techniques to extract key features, and generated insightful visualizations and discoveries of important class characteristics.
- * Implemented a hierarchical multistage human activity recognition classifier in **PyTorch** with accelerometer data for swimming action classification, achieving a **88.9%** Macro-F1 on differentiating land and water tasks.
- * Presented research to judges during a Student Research Week event and wrote an undergraduate thesis for the Undergraduate Research Scholars program.

Texas A&M University

Peer Teacher

Aug. 2023 – May 2026

Bryan, Texas

- * Delivered foundational Python instruction to more than **90** first-year engineering students, created quizzes, and coordinated grading of assignments, quizzes, and exams to strengthen core programming concepts.
- * Led large-scale test reviews averaging **60** participants and produced supplemental content to reinforce lecture materials.

Engineering TAO

Bot and Server Officer

Apr. 2023 – May 2026

Texas A&M University

- * Oversaw the largest TAMU Engineering Discord server, moderating and providing support to a 5,500-member community to ensure timely assistance and foster a collaborative learning environment.
- * Assisted in the development and management of a Python-based Discord bot to automate role assignments, channel creation, and permission management.

Projects

SHIELDS: Multi-Agent OS Security Hardening | *Python, OpenSCAP, LLMs, Linux, SSH, XML*

May 2026

- * Created three Linux test environments with increasing levels of **OpenSCAP STIG** vulnerabilities to evaluate an **LLM-powered** security remediation pipeline under different LLMs and security environments.
- * Implemented a multi-agent workflow that parsed OpenSCAP findings, triaged vulnerabilities, generated remediation commands, executed fixes, validated system state, and iteratively rescanned.
- * Evaluated several large language models with detailed logging of model outputs and reasoning traces across pipeline steps, and contributed to an arXiv paper analyzing how LLMs reason through operating-system security hardening tasks.

Weakly Supervised ICD-Codable Clinical Text Detection | *PyTorch, Transformers, NLP*

May 2026

- * Developed a two-stage clinical NLP pipeline using document-level ICD labels and gated attention-based multiple instance learning to identify codable segments within lengthy medical notes, and contributed to an IEEE-formatted research paper evaluating the approach for extracting clinically important information from medical notes.
- * Implemented text preprocessing, contributed to a TransICD-based initial model, and tuned model hyperparameters for training on long clinical documents segmented into fixed-length token windows.
- * Trained a frozen **BioClinicalBERT** encoder with a two-layer MLP classifier, achieving **89.9% AUC**, **77.2% F1**, and **81.5% accuracy** on a labeled test set

NotOnMyBingoSheet | *React, Node.js, Express.js, MySQL, AWS Cognito, IAM & RDS*

Jan. 2025

- * Engineered a web application(notonmybingosheetstaticpage.onrender.com) to create, save, and share Bingo sheets.
- * Integrated **AWS Cognito** for secure user authentication, ensuring confidential access and sharing permissions for Bingo sheet management.
- * Architected a full-stack solution using **AWS RDS** to store user information and bingo sheets in multiple SQL tables and deployed on **Render**, with 11 consistent users.

Technical Skills

Developer Tools: AWS, BigQuery, DigitalOcean, GitHub, Hugging Face Transformers, Jupyter Notebook, Linux, MySQL, Node.js, NumPy, Pandas, PostgreSQL, PyTorch, React, Scikit-learn

Languages: C++, HTML/CSS, Java, JavaScript, LaTeX, Python, R, SQL, TypeScript