YUEXIN ZHANG

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EDUCATION

Texas A&M University **Texas, US**

B.S. in Computer Engineering; Cumulative GPA: 3.683/4.0; Major GPA: 3.702/4.0 *06/2022 - 05/2026*

Honor: *Dean's Honor Roll; Fluor Daniel Aggies Endowed Scholarship (2024)*

SKILLS

Programming: *Python, C++, Java, JavaScript, C, R, SQL, NoSQL, Arduino*

Hardware & Embedded Systems: *FPGA Design & SoC Integration, Vivado Design Suite, PetaLinux, Vitis/SDK, Serial Communication, Embedded Linux Development, Hardware Debugging, Raspberry Pi, Verilog*

Web Development & Tools: *HTML, CSS, Bootstrap, REST API, Figma*

Cloud & Platforms: *AWS, Azure, Microsoft Office, Docker*

Other: *Full-Stack Deep Learning with Python*

Language: *Chinese (native), English (proficient)*

Hobbies: *Equestrian riding (5 yrs, champion), tennis (7 yrs, district-level 2 yrs), pickleball, volleyball, indoor soccer, country swing dance*

INTERNSHIPS

Hangzhou Tongshang Optoelectronics Co., Ltd. **Remote**

Software/Automation Intern *05/2025 - 08/2025*

- Designed and implemented Python-based control software for synchronizing three heterogeneous devices, enabling real-time brightness adjustment, monitoring, and fault alerts
- Developed modular architecture supporting hot-swappable compatibility for new device models
- Processed and segmented 20GB of raw photometric data, implementing automated labeling to generate structured training samples
- Optimized data preprocessing workflow, improving subsequent model training efficiency by 40%

Supcon Technology **Hangzhou, China**

Software Engineering Intern | Digital Technology Product Department | 40hrs/week *06/2024 - 08/2024*

- Collaborated with the team to develop an RAG framework, integrating FAISS vector retrieval with GPT models to enhance the accuracy and real-time performance of the QA system; optimized retrieval strategies to filter high-relevance documents as contextual input, mitigating model hallucination issues
- Built an enterprise-grade vector database using Milvus, indexing unstructured data such as technical documentation and customer service records; designed ETL pipelines to clean and vectorize multi-format documents (PDFs, PPTs, Excel), enabling efficient semantic search
- Developed Python scripts for batch processing raw data, including text cleaning, chunking, and vectorization to improve training data quality
- Participated in model fine-tuning experiments, optimizing hyperparameters, and evaluating performance before deployment to the company-wide platform

SELECTED PROJECTS

Resume Chatbot (Personal Project) | *Sole Developer | PyTorch, OpenAI API, Flask, AWS EC2* *05/2024 - Present*

- Generate thousands of resume-related Q&A pairs automatically using OpenAI API and trained a 110M-parameter Transformer-based chatbot with PyTorch
- Build backend API interfaces with Flask and deployed the system on AWS EC2 cloud server before integrating it into personal website (yuexin-zhang.com)
- Developed a mobile-responsive design to intelligently parse resume-related queries and provide professional answers

Portfolio Website (Personal Project) | *Sole Developer | Frontend Development* *03/2024 - Present*

- Build a responsive portfolio website using HTML5, CSS3, and vanilla JavaScript to showcase technical projects and professional qualifications
- Implement mobile-first design with CSS Flexbox/Grid
- Deploy via GitHub Pages with custom domain configuration

FPGA-Based Symmetric FIR Filter Design | *ECEN 449 Honors Project* *09/2025 - 12/2025*

- Designed and implemented an 8-tap symmetric FIR filter hardware accelerator on a Zynq-7000 FPGA.
- Established communication between the Processing System (PS) and Programmable Logic (PL) via the AXI4-Lite bus and developed C programs to validate functionality
- Analyzed data throughput bottlenecks and identified AXI4-Stream as a potential future optimization

Event & Meeting Management Platform Development | *CSCE431 Software Engineering* *09/2025 - 12/2025*

- Used Agile methodology with Docker development containers and Ruby on Rails as the Scrum Master/Product Owner to build a responsive web portal; served as the sole public-facing, permanent access point for all users
- Developed Calendar-Widget to add/edit events (talks, training, volunteering, career fairs, etc.), detect time/venue conflicts, and export iCal files
- Created Guest-Sign module: no-account RSVP via name/email, real-time head-count, automatic wait-list when full; integrated Meeting-Manager that lets members schedule meetings with auto email reminders and recurring templates

Balanced Robot, Texas A&M | *Team Leader* *09/2024 - 08/2025*

- Organized weekly team meetings; synchronized parallel work across mechanical, electrical, and software tracks
- Developed the control strategy and dynamic simulation for a two-wheeled inverted-pendulum robot as a baseline study
- Owned system-level design of a spherical, BB-8-inspired balancing robot, including shell structure, internal drive layout, and sensor integration
- Established a unified testbed and evaluation metrics to benchmark and iteratively refine balancing-robot architectures

Panda Express Point of Sale System | *CSCE 331 Course Project* | *Lead Backend Developer* *10/2024 - 12/2024*

- Built RESTful APIs with Node.js + Express for order creation, real-time inventory deduction, and daily sales reports; endpoints returned in ≈150 ms
- Designed eight core PostgreSQL tables with foreign keys and triggers to prevent negative stock; nightly script auto-aggregated sales into CSV for managers
- Reduced checkout flow from five steps to three by leveraging the same API; checkout time dropped from 37s to 28s, and one less page redirect was added to the frontend

RESEARCH EXPERIENCE

AI in the Classroom: Student Perceptions & Impact

Researcher, instructed by Prof. Robert Lightfoot, Texas A&M University *09/2025 - Present*

- Interview undergraduates about AI-tool use and comfort levels during class activities; compile qualitative feedback for code-book construction
- Process and clean paired classroom data from current and prior semesters using Python, and perform statistical visualization with Matplotlib and Python for comparative analysis
- Prepare baseline report on student-reported benefits and concerns regarding AI integration in coursework
- To present the findings at the ASEE (American Society for Engineering Education) Conference in March 2026

LEADERSHIP & INVOLVEMENT

Logistics Director | **Texas A&M Class Councils - Elephant Walk** *09/2025 - Present*

- Orchestrate venue, security, catering, and transportation for a graduation tradition, ensuring safety and execution

Recruitment Director | **Aggie Icers (nonprofit program for collegiate athletics)** *09/2024 - Present*

- Plan our signature formal & recruiting events with the exec team to celebrate and welcome Icers

Member | **IEEE** *05/2023 - Present*

- Engage in IEEE activities: presentations, corporate meetings, and professional development workshops

Member | **Class Councils** *10/2022 - Present*

- Facilitate university traditions, handling logistics, student engagement, and setup to create lasting, unifying moments

Counselor | **Texas A&M Fish Camp** *09/2022 - Present*

- Mentored 10 freshmen and facilitated camp activities for 150+ attendees to support university integration

Counselor | **Freshmen Council** *05/2023 - 05/2024*

- Coordinated a 90-person mentorship program pairing freshmen with experienced peers to ease first-year transition

Logistics Director | **Texas A&M Fish Fest** *11/2022 - 04/2023*

- Oversaw entertainment and food services for a freshman tradition event with 2,000+ attendees