

Owen Wang

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EDUCATION

University of Illinois at Urbana-Champaign

Urbana, IL

B.S. in Computer Engineering, James Scholar Honors Program

Expected, May 2026

- **GPA:** 3.97/4.00

- **Courses:** Parallel Programming, Data Structures, Computer Systems, Probability, Linear Algebra, Analog Signal

Additional Courses: Udemy TensorFlow for Deep Learning, Udemy Langchain & LLMS, Udemy OpenCV

TECHNICAL SKILLS

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

Frameworks: React, Next, Django, Spring Boot, TensorFlow, CUDA, LangChain, OpenCV

Databases/Cloud: PostgreSQL, Firebase, AWS (EC2, S3), Docker

EXPERIENCE

JACS Solutions

June 2024 – Aug 2024

Embedded Systems Engineering Intern

Baltimore, MD

- Designed FOTA (firmware over the air) features for mobile device management system via a bi-directional **WebSocket connection** established between server and devices through Spring Boot.
- Migrated frontend to React.js and leveraged RESTful API to create **2 microservices** with **10+ endpoints**, enhancing client-side CRUD operations and optimizing server performance **by 5%**
- Refactored backend logic into a **Model-View-Controller** architecture, streamlining FOTA management and saving customers **3+ hours** of manual work.
- Resolved **15+ bugs** by drafting and deploying integration tests with the Spring Boot testing library.

Hydrologic

Oct 2023 – May 2024

Project Lead

Urbana, IL

- Established an ESP32 to Firebase Realtime-Database connection to retrieve University Housing shower statistics and analyzed data to reduce average water consumption **by 10%**.
- Led a **group of four** to architect filtering, saving, and comparison functionalities using Next.js and Tailwind.
- Applied SCRUM principles through Jira, delivering **20% ahead** of schedule and **7% under** budget.

UIUC EV Concept

Aug 2023 – Jan 2024

Electrical Team

Urbana, IL

- Developed BMS monitoring system by designing a PCB that measures cell voltage, temperature, and current.
- Trained a **neural network** in TensorFlow that estimates State of Charge using **linear regression** via a **supervised learning** approach with simulation values, improving BMS efficiency **by 30%** upon implementation.

PROJECTS

Skim Lit | *TensorFlow, NLP*

Aug 2024 – Aug 2024

- Engineered a **multimodal NLP** model that uses **RNNs** to summarize and classify scientific paper abstracts.
- Performed experiments on **5 models**, achieving an accuracy of **88%** with BERT embeddings and **feature engineered** positional embeddings.

Dish Detect | *TensorFlow, Streamlit*

July 2024 – Aug 2024

- Utilized **feature-extraction** and **fine-tuning** to create a **CNN model** that classifies food present in an image.
- Achieved a model accuracy of **85%**, beating the Deep Food paper by **7% in only 2.5%** of the training time.

Chain GPT | *LangChain, StreamLit*

July 2024 – Aug 2024

- Developed an **interactive** LangChain document helper using **RAG** to an OpenAI embedded Pinecone VectorDB.
- Incorporated **agentic RAG** with **ReAct** and model memory increasing output accuracy and precision

Spotify Vault | *React.js, Django, PostgreSQL*

May 2024 – July 2024

- Designed a web application to track, store, and display historical Spotify statistics, integrating Spotify API with a React.js frontend and Django backend connected to a PostgreSQL database.
- Built RESTful API in Django with **CSRF tokens** to ensure secure and efficient data processing.