

Arthur Teng

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EDUCATION

University of Central Florida

Bachelor of Science in Computer Science

Orlando, FL

May 2027

- Relevant Coursework: Data Structures 1 & 2, Object-Oriented Programming, Java Enterprise Computing
- GPA: 3.5

TECHNICAL SKILLS

Languages: Java, Python, JavaScript, TypeScript, HTML, CSS, C, SQL

Libraries / Frameworks: React, Next.js, Tailwind CSS, Three.js, Node.js, Express.js, tRPC, Drizzle ORM, Flask, TensorFlow, OpenCV, Pandas, NumPy, Gemini A2A, Gemini API, OpenAI API

Tools: Git, GitHub, Linux, Docker, Cloudflare, AWS, Figma, Visual Studio Code, MongoDB, PostgreSQL, Google ADK

EXPERIENCE

Software Engineer Intern

Mar 2025 – Present

Knight Hacks

Orlando, FL

- Built an event check-in system that balances class assignments, updates the **PostgreSQL** database through **Drizzle ORM**, and gives Discord roles for a **5,000+ member** Discord server.
- Revamped the admin dashboard to streamline hacker management for a **1,000+ participant hackathon**, improving organizer efficiency by **30%** through an intuitive UI for managing applicants and tracking live statistics.
- Built type-safe **API routes** with **tRPC**, ensuring seamless communication between the frontend and backend.
- Collaborated in a **sprint-based environment** within a monorepo using **Git** and **pull requests**.

PROJECTS

ER-NIGHTFALL | Gemini ADK & A2A, OpenCV, YOLOv8, Python, Flask, Tailwind CSS, React

Oct 2025

- Developed an **autonomous search-and-rescue drone** prototype using **Gemini ADK & A2A agents** for multi-agent coordination, capable of detecting human heat signatures and avoiding obstacles.
- Implemented a separate **YOLOv8n** pipeline using a **thermal** camera to identify human-shaped heat signatures.
- Integrated **MAVSDK** for flight control and geotagging to stream detections and map coordinates in real time.

SightSpeech | OpenCV, EasyOCR API, Flask, Python, React, MediaPipe API, Gemini API, JavaScript

Sept 2025

- Won **1st Place** in the Gemini API Challenge at **ShellHacks 2025** out of **240+** projects.
- Created an **accessibility tool** that enables the legally blind to intuitively tab through all detected text in their POV with simple hand gestures, providing a navigation experience very similar to browsing a website.
- Developed **Optical Character Recognition** with **EasyOCR**, optimizing runtime by **40%** to reduce system load during real-time text detection, with **Gemini API** as a safety net ensuring accuracy in text recognition.
- Integrated **MediaPipe** for ASL-inspired gesture recognition, and designed reliable **RESTful APIs** with **Flask** to reliably control features such as tab-forward, tab-backward, and POV text scanning.

AIstheticQR | OpenAI API, Figma, Tailwind CSS, React, TypeScript, Express.js, Postman, MongoDB

May 2025

- Developed a web app that generates appealing, AI-enhanced QR codes using **OpenAI's** image generation API.
- Designed an intuitive UI in **Figma** and implemented it with **React**, **TypeScript**, and **Tailwind CSS**.
- Built and deployed the backend with **Express.js** and **MongoDB**, optimized to handle **2,000+ API calls/day** with response times under **300 ms**, validated via **Postman** testing.

Task-it | React, TypeScript, Express.js, Tailwind CSS, Node.js, MongoDB, Expo

Apr 2025

- Developed a full-stack task management application that tracks daily task completion and user streaks.
- Designed and implemented **RESTful APIs** with **Express.js**, integrating **MongoDB** for efficient data storage.
- Led a **7-member team** as **project manager**; created Gantt charts, set deadlines, and improved development efficiency by **20%** while contributing to frontend, backend, and database tasks.

EXTRACURRICULAR ACTIVITIES

Knight Hacks

Feb 2024 – Present

Paid Member & Software Engineer Team Member

Society of Hispanic Professional Engineers (SHPE)

Apr 2024 – Present

Dev Team & Paid Member