

Rainier Joshua Tabelon

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EDUCATION

University of Florida – Herbert Wertheim College of Engineering <i>Bachelor of Science in Computer Science, Minor in Electrical Engineering</i>	GPA: 3.98/4.0
	Aug 2023 – May 2027

Relevant Coursework: Data Structures & Algorithms, Operating Systems, Computer Architecture, Software Engineering, Programming Language Concepts, Full Stack IoT Development, Computer Networks, Internet Storage Systems

TECHNICAL SKILLS

Languages: Python, JavaScript, TypeScript, Go, C++, Java, HTML, CSS, SQL, Bash

Frameworks & Libraries: React, Express, Jest, Redux, Tailwind CSS, Socket.IO

Tools: AWS (EC2, S3), Docker, Git, GitHub Actions, Linux, Redis, PostgreSQL, Figma, Postman, Node, REST APIs, JWT, LLMs

EXPERIENCE

Software Engineering Intern AKIO AI	Oct 2025 – Present Gainesville, FL
● Built a React analytics dashboard aggregating thousands of speech events for therapists to track client progress.	
● Optimized rendering via memoization and batched updates, preventing UI stalls under high-frequency data updates.	
● Engineered an asynchronous WebSocket audio transcription system in Go for live therapy session note-taking, reducing speech-to-text latency by 3s without data loss.	
● Added retry logic and connection health monitoring to handle network interruptions gracefully during live sessions.	
Lead Backend Engineer Society of Asian Scientists and Engineers (SASE)	Sep 2025 – Present Gainesville, FL
● Led backend development on a 9-member Agile team, defining sprint scope and enforcing service ownership.	
● Developed an alumni bank update pipeline that ingests all stored LinkedIn profiles via an MCP server, atomically updating 200+ organization-wide alumni records in a single sync.	
● Implemented idempotent, conflict-safe upserts to ensure repeatable refreshes without data regression.	
Software Engineering Intern EDU Africa	May 2025 – Jun 2025 Cape Town, South Africa
● Built a MERN platform digitizing public-sector housing audits, replacing paper workflows across 30 municipalities.	
● Implemented server-side pagination and filtering over a 600K+ record dataset, preventing client overfetching.	
● Added Redis caching for read-heavy audit endpoints, improving scalability under concurrent access.	
● Optimized frontend for <4GB RAM devices and unstable networks via deferred loading and asset minimization.	

PROJECTS

CoreCRM AWS EC2, Docker, Jest, Express, Node, PostgreSQL, Neon, Drizzle ORM, JWT, Nginx	Source Code
● Shipped a production CRM platform with strict relational integrity and role-based access control.	
● Deployed on a single AWS EC2 instance with Nginx isolation and persistent volumes for crash-safe restarts.	
● Automated a CI/CD pipeline with GitHub Actions to test, build, and deploy Dockerized services to a remote VM over SSH, cutting deployment time by 60% and ensuring reproducible dev-to-prod builds.	
● Hardened public APIs against abuse using Arcjet, applying bot detection and sliding-window rate-limit policies.	
PicklePortal Python, Ultralytics YOLOv8, C++, Arduino, ESP32, Firebase RTDB	Source Code
● Engineered a distributed IoT system integrating ESP32 cameras, computer vision-based object detection model, and Firebase Realtime Database to track pickleball court occupancy and queues in real time.	
● Streamed frames into a persistent YOLOv8 worker, eliminating process startup and cutting detection latency by 50%.	
● Designed dual-mode ESP32 camera firmware (JPEG inference vs. MJPEG streaming) to optimize network bandwidth under tight memory and CPU constraints.	