Rainier Joshua Tabelon

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EDUCATION

University of Florida – Herbert Wertheim College of Engineering GPA: 3.98/4.0
Bachelor of Science in Computer Science, Minor in Electrical Engineering 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, C++, Java, TypeScript, JavaScript, HTML, CSS, SQL, Bash
Frameworks & Libraries: React, Express, Jest, Supertest, Tailwind CSS, Recharts, Arcjet, Drizzle ORM, Axios, Zod
Technologies: AWS EC2, Linux, Docker, Git, GitHub Actions, Node, PostgreSQL, Firebase, Postman, Nginx, JWT, REST APIs

EXPERIENCE

Software Engineering Intern Oct 2025 – Present
AKIO AI *Gainesville, FL*

- Architected and shipped a speech-therapy analytics dashboard with Recharts, using client-side aggregation and memoization to efficiently visualize speech events generated during live therapy sessions and gameplay.
- Built modular React + Tailwind components, reducing UI duplication and regression risk during feature expansion.
- Engineered a real-time therapy note-taking system that records live session conversations and converts them into structured notes, supporting in-session documentation and minimizing post-session overhead.

Lead Backend Engineer Sep 2025 – Present
Society of Asian Scientists and Engineers (SASE) *Gainesville, FL*

- Led backend development of the UF SASE website within a 9-member Agile Scrum team, defining sprint scope and reviewing pull requests to enforce code quality and service ownership before production releases.
- Designed an admin-gated alumni bank refresh pipeline that re-ingests all LinkedIn profiles via a persistent MCP client, atomically updating organization-wide alumni records in a single sync.
- Implemented idempotent, conflict-safe database writes using primary-key upserts and field-level merge logic, ensuring refreshes are repeatable and do not overwrite higher-quality existing data during batch updates.

Software Engineering Intern May 2025 – Jun 2025
EDU Africa *Cape Town, South Africa*

- Developed a role-based web platform to digitize public-sector housing audits, replacing paper workflows with authenticated CRUD pipelines and audit-trail logging across 30 municipalities.
- Built server-side pagination and filtered query paths to operate over a 600K+ record dataset, enabling fast browsing and filtering without full dataset fetches.
- Optimized frontend performance through responsive layout constraints, asset minimization, and deferred loading to maintain usability on low-end devices with less than 4 GB RAM and unstable networks.
- Ran iterative usability testing within an Agile workflow, converting feedback from 22 stakeholders into Jira-tracked navigation and data-flow refactors over 5 sprint cycles.

PROJECTS

CoreCRM | *AWS EC2, Docker, GitHub Actions, Jest/Supertest, PostgreSQL, JWT, Arcjet* GitHub

- Developed and deployed a full-stack CRM on a single AWS EC2 instance, serving a React SPA through Nginx and reverse-proxying a Node/Express API to support cookie-based auth without CORS issues.
- Hardened public APIs against abuse using Arcjet, applying bot detection and sliding-window rate-limit policies to enforce request caps and block automated traffic.
- Implemented a CI/CD pipeline with GitHub Actions and Docker to run Jest/Supertest tests, build and publish Docker images, and roll out updates to a cloud-hosted VM via Docker Compose.

PicklePortal | *ESP32, Arduino, C++, Firebase RTDB, Python, Ultralytics YOLOv8* GitHub

- Engineered a distributed IoT system integrating ESP32 camera nodes, an object-detection model, and Firebase RTDB to track pickleball court occupancy and queues in real time.
- Optimized the computer vision pipeline for continuous load by streaming JPEG frames into a persistent Python YOLOv8 worker, eliminating per-request process startup and reducing detection latency by 50%.