# Karryl Dumalag

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#### **EDUCATION**

# **Bachelor of Science in Engineering, Computer Systems Engineering**

May 2025

Arizona State University, Tempe, AZ

• Relevant Coursework: Algorithms & Data Structures; Networks; Operating Systems; Computer Architecture; **Embedded Programming** 

Tools & Frameworks: React, Next.is, Google Cloud, Linux, .NET, Agile, CI/CD, Postgresql, REST, Prisma Languages: C/C++, Python, Java, JavaScript, Typescript, SQL

#### PROFESSIONAL EXPERIENCE

## **Software Engineer, Intern** | *Irenic Therapeutics*

Jul 2025 - Present

- Designing and implementing backend architecture for a HIPAA-compliant EHR system, improving system reliability and supporting secure, scalable data processing across the application stack.
- Reduced client-side data bottleneck by optimizing data handling and rendering logic in a mobile application.

## **Software Engineer, Student Contractor (Capstone)** | *General Dynamics Mission Systems*

Aug 2024 - May 2025

- Accelerated automated test creation by ~20% by developing a cross-platform testing framework tailored for secure communications systems under strict DoD standards.
- Increased test coverage by integrating OCR-driven validation modules, improving accuracy and reliability of encrypted communication verification.
- Influenced project direction by presenting detailed test reports and strategic recommendations to stakeholders, strengthening alignment across engineering and program teams.

# **Software Developer, Intern** | 28 Gorilla Engineering

Mar 2024 - Apr 2025

- Improved IoT testing efficiency regarding performance validation by 16% by developing a scalable, multi-threaded backend system that reduced real-time data latency during machine evaluations.
- Designed a real-time data pipeline to ingest and process high-frequency BMS telemetry, enabling low-latency analysis and dynamic charting for large-scale battery performance monitoring.
- Boosted team productivity by documenting workflows and implementing organizational improvements that streamlined daily operations.

### **Enterprise Technical Support Specialist** | *Education At Work*

Jan 2023 - July 2023

Resolved an average of 40+ enterprise-level technical issues per week for Microsoft Surface devices by providing Tier 2/3 remote troubleshooting, system diagnostics, and escalation support, reducing client downtime by 25%.

#### **SOFTWARE PROJECTS**

**VOLEX – Banking App** | Next.js, TypeScript, Appwrite, Plaid, Dwolla, React, TailwindCSS

Apr 2024 - Dec 2024

Built a secure, SSR-authenticated financial app with real-time transaction tracking and automated payments by integrating Plaid/Dwolla APIs and balancing performant UI design with robust backend logic.

#### **Spotify Analytics Web Dashboard** | *Javascript, Express.js, Pug, CSS, OAuth2*

Nov 2023 - Dec 2023

Engineered a real-time music analytics web dashboard enabling users to securely log in with Spotify and view their up-to-date listening statistics.

#### EffortLogger v2.0 | JavaFX, FXML, MySQL

Jun 2023 - Dec 2023

- Reduced administrative overhead by 27% by leading a team of 4 developers to deliver a secure, privacy-first sprint planning platform.
- Managed end-to-end software development lifecycle by overseeing project scoping, Agile documentation, backlog grooming, and deployment, for timely and structured delivery.