

# Karryl Dumalag

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## EDUCATION

### Computer Systems Engineering (BSE)

August 2021 - May 2025

Arizona State University, Tempe, AZ

- **Relevant Coursework:** Algorithms and Data Structures, Operating Systems, Software Engineering, Data Science, Networks, Design/Synthesis of Digital Hardware, Circuits, Signal Processing, Embedded Microprocessor Systems, Computer Architecture.
- **Certificate: Mathematical Concepts of Engineering** May 2025

### Applied Science (AS) (honors) (HS dual enrollment) (3.8/4.0 GPA)

August 2019 - May 2021

College of Southern Nevada, Las Vegas, NV

## PROFESSIONAL & LEADERSHIP EXPERIENCE

### Software Developer Intern | 28 Gorilla Engineering | Chandler, AZ

March 2024 - Present

- Developing a scalable, multi-threaded data collection and processing backend architecture to address the problem of slow real-time data analysis. Improved data handling efficiency by 16% and enabled interactive GUI web interfaces enhancing UI/UX.
- Designing and implementing user-friendly web interfaces, addressing the need for better IoT device data analysis tools.
- Reorganized documentation processes to improve inefficient work practices, leading to a 10% boost in work efficiency.
- Supported hardware development through schematics, circuit board reverse engineering, and soldering.

### Turn Pro Participant | Management Leadership for Tomorrow | Washington, D.C.

June 2023 - Present

- Engage in this professional development program for diverse undergraduate talent attending select universities.
- Complete program coursework to hone career-development aptitude and industry knowledge.
- Attend events hosted by industry leaders in technology, financial services, consulting, marketing, HR and healthcare.

### Microsoft Enterprise IT Support | Education At Work | Tempe, AZ

January 2023 - July 2023

- Conducted diagnostic tests and analyzed error logs, resolving technical issues 20% faster than the average resolution time.
- Created detailed work orders and documentation, streamlining workflow and improving issue tracking efficiency by 15%.

## TECHNICAL PROJECTS

### Website Portfolio: <https://kayejd.github.io/>

May 2022 - Present

### General Dynamics Mission Systems - Secure Communication Platform Test Process Development

August 2024 - Present

- Tech Stack: Qt, C++, Squish GUI Tester, Linux, Git
- Designing and implementing a comprehensive test process for a secure communication platform on a Linux-based touchscreen device, utilizing Qt for GUI implementation and Squish GUI Tester for automated testing.

### VOLEX: Banking App

April 2024 - Present

- Tech Stack: Next.js, TypeScript, Appwrite, Plaid, Dwolla, React Hook Form, Zod, TailwindCSS, Chart.js, ShadCN
- Developing a secure (SSR authentication) and user-friendly platform for managing finances with features for tracking transactions, managing payments, and, most importantly, visualizing financial data.

### Spotify WebAPI Integration

Nov 2023 - Dec 2023

- Tech Stack: Javascript, Express.js, Pug, CSS, API, OAuth2
- Developed the backend of a web application using Express.js to handle user authentication (OAuth2), manage API requests efficiently, and serve dynamic content.
- Integrated Spotify's API to generate personalized song recommendations based on user data to increase user engagement.

### Credit Card Fraud Detection

Oct 2023 - Nov 2023

- Tech Stack: Python, Jupyter, pandas
- Created a machine learning model using Python and TensorFlow to detect fraudulent transactions. Improved model accuracy by 18% by addressing data imbalance and utilizing performance metrics like precision, recall, and F1-score.

### EffortLogger v2.0

Sep 2023 - Dec 2023

- Tech Stack: Eclipse, JavaFX, FXML, MySQL
- Developed a software program to enhance user privacy and facilitate data management during Sprint Planning.
- Streamlined team collaboration for sprint planning and reduced management overhead by 27%.
- Managed end-to-end development, including testing, UML diagrams, and comprehensive documentation.

## SKILLS

**Technical:** C++ | Java | Python | Javascript | Typescript | OOP | Docker | React | Git | HTML | CSS | Node.js | REST | Tableau | R | SQL

**Soft:** Agile | Documentation | Communication | Adaptable | Test-Driven Development | User Requirements | SDLC | CI/CD | Troubleshooting