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# GARY I. FISHELL

GARYFISHELL.DEV

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## EDUCATION

**San Diego, CA** **San Diego State University** **Fall 2017 – Dec 2020**

- B.S in Computer Science. In-major GPA: 4.0. Overall GPA: 3.9. Awarded Suma Cum Laude.
- Undergraduate Coursework: Systems and Software Engineering; Operating Systems; Databases; Algorithm Analysis; Comp. Architecture; Cyber Security.

## EMPLOYMENT

**Cloud Software Engineer** **Hewlett Packard** **Summer 2022**

- Engineered critical business logic for Instant Ink backend services using Ruby On Rails.
- Developed a Java Spring Boot service to process printer usage data from SQS and store it in MongoDB.
- Transformed high-level system architecture requirements into AWS infrastructure using Terraform.
- Monitored and optimized business-critical systems through AWS resource scaling for peak usage hours.

**Software Engineer** **Northrop Grumman** **Winter 2018 – Summer 2022**

- Utilized React & Redux to transform a mission critical Java Swing application into a web UI.
- Interfaced embedded device queries into a PostgreSQL database & published to a web UI.
- Streamlined developer workflow using Docker containers to optimize integration testing.
- Implemented Java Swing framework to create a table application with touch-screen support.

## TECHNICAL EXPERIENCE

**Projects**

- **Subscription-Based Content Platform (2024): NestJS, NextJS, React, Typescript, Redis, MongoDB**
  - Created a React component using WebSockets to enable real-time communication.
  - Orchestrated creation of new backend endpoints to facilitate admin-to-user messaging.
  - Revamped frontend, backend and MongoDB schema to support a new subscription model.
- **Graffiti Incident Tracker System (2020): HTML, Bootstrap, Javascript, Python, Flask, SQLite**
  - Developed a graffiti incident tracking web application which utilizes a RESTful API using Flask.
  - Utilized Google Maps API to provide geospatial awareness of incidents.
  - Built a graffiti incident reporting form which allows users to publish findings to an SQLite database.
  - Implemented multi-role login system utilizing Flask-Login for session management.
  - Utilized Selenium WebDriver to exercise client and server logic across all endpoints.
- **CHIP-8 Interpreter (2021): C++, Simple DirectMedia Layer (SDL)**
  - Created a CHIP-8 interpreter to virtualize games ran on the Telmac 1800 8-Bit microcomputer.
  - Formulated a system architecture to replicate CHIP-8 hardware (Registers, memory, opcode interpretation).
  - Utilized the Simple DirectMedia Layer (SDL) library to replicate sound, display, and input.
  - Designed a Debugging User Interface to display system level information.
- **Dodgy Bullet (2020): C# and Unity 3D**
  - Created a 3D game using the Unity game engine where the player must dodge objects and shoot robots.
  - Developed complex game logic with attention to memory usage using C#.

## Languages and Technologies

- Java; Ruby On Rails; TypeScript; C++; C; C#; Python
- NestJS; NextJS; Springboot; Unity; Unix/Linux; MongoDB; PostgreSql; Redis; AWS