

# CHRISTOPHER REBOLLAR-RAMIREZ

San Diego, CA

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## Education

### University of California San Diego

La Jolla, California

Bachelor of Science in Mathematics & Computer Science

Expected Graduation, June 2025

Bachelor of Science in Cognitive Science with a Specialization in Machine Learning and Neural Computation

## Relevant Coursework

- Advanced Data Structures in C++
- Supervised Machine Learning Algorithms
- Practical Data Science with Python
- Algorithm Design & Analysis
- Software Engineering
- Machine learning in Practice using Python
- Discrete Structures
- Computer Organization in C/ARM
- Deep Learning

## Experience

### ACM Hack

San Diego, California

Team Lead

Sept 2024 – Jan 2025

- Developed Swipe Style, a Tinder-inspired web app for browsing fashion items, using **MERN Stack** and **TailwindCSS**.
- Implemented **10 API routes** for managing user interactions and integrating **Google OAuth** for secure authentication.
- Led a team of **5 members**, organized **weekly meetings**, and delegated tasks to ensure efficient development.

## Projects

### DaybyDay | Full-Stack Web App

- Developed a responsive frontend with **React.js** and **TailwindCSS**, building **5+ reusable components** for dynamic user interfaces.
- Designed a robust backend using Python **Django** and **AWS DynamoDB**.
- Built a real-time chatbot with **OpenAI API**, **WebSockets**, and **Retrieval-Augmented Generation (RAG)** for accuracy.
- Conducted **unit testing** for backend features using **Django Rest Framework (DRF)** and implemented **10+ API routes** for managing user interactions. Implemented secure **user authentication** with Django and **JWT tokens**.

### JMGWorkScape | iOS App

- Co-developed JMGWorkScape, an iOS app for managing work orders, service schedules, and property details.
- Built a **PDF invoice generator** for seamless invoice creation and export, enhancing workflow efficiency.
- Implemented **optimized search** and **full CRUD functionality** for streamlined house and service management.
- Designed a clean, accessible **SwiftUI interface** and added a routing feature to improve team scheduling and resource allocation.

### Habitizer | Android App

- Developed Habitizer, a productivity app that lets users build and manage multi-task routines, with real-time tracking via a **custom stopwatch feature**.
- Built and maintained **CI/CD pipelines** using **GitHub Actions** to automate builds, testing, and deployment, streamlining development workflows.
- Collaborated with a **team of 5** in an **Agile** environment, contributing to **sprint planning**, **feature implementation**, and **peer code reviews**. Ensured app stability through **unit** and **UI testing** with **JUnit** and **Robolectric**.

### Shakespeare RNN | Deep Learning, NLP

- Achieved record-low test loss of **1.3237** by developing **LSTM** and **RNN models** with up to **512-character sequence handling**, optimized further with a **300-neuron dual-hidden-layer** configuration.
- Enhanced training convergence and text quality using **teacher forcing**, significantly improving model performance across various temperature settings. Balanced grammar and creativity in **text generation** to mimic Shakespeare at **medium temperatures**.

## Technical Skills

**Languages:** C++, Python, Java, JavaScript, TypeScript, Swift, HTML/CSS

**Frameworks & Tools:** React.js, Next.js, Node.js, Express.js, Django, Flask, AWS, MongoDB, SQL, DynamoDB, TailwindCSS

**Developer Tools:** Git, Docker, GDB, JDB, Valgrind, GPROF

**Certification:** PC Core Hardware A+ Cert, PC Operating System A+ Cert

**Professional Skills:** Communication, Time Management, Teamwork, Critical Thinking

## LEADERSHIP & EXTRACURRICULAR ACTIVITIES

### SkillsUSA Competitions

Los Angeles, California

Competitor/Mentor

January 2019

- Competed using C++, placing **3rd** among **20 participants** at the regional and state levels, demonstrating proficiency in program design and problem-solving.