Ryan Cavanagh

https://cavanagh.dev

WORK EXPERIENCE

Flexport
Full-Stack Engineer July 2022 – October 2023

- Designed, implemented, and integrated Plaid and Stripe for instant verification of bank accounts, enabling instant fulfillment of user's orders.
- Designed and implemented a single DocuSign integration that can be used by all clients, streamlining the signing process and reducing operator involvement by 60%.
- Improved and built onto legacy monolith code, reducing webhook event emit times by 20% and customer wait times by an average of 5 seconds.
- Collaborated with and retained high-volume clients to address their needs and implement new features, including a new feature that reduced customer support tickets by 10%.

American Express
Software Engineer Intern June 2021 – August 2021

- Improved build times by 80% by converting a Java repo from Maven to Gradle, reducing developer build times by an average of 4 minutes.
- Built, deployed, and presented a new API to help developers access Elasticsearch data more securely and faster, allowing developers to streamline their workflows and build features faster.

California State University Long Beach
Research Assistant (Machine Learning) January 2021 – January 2023

- Composed CNN, RNN, and ensemble models to predict gait cycles from test individuals with an accuracy of 95%.
- Paper pending review in a top machine learning conference.

Research Assistant (Robotics) November 2019 – March 2022

- Collaborated with The Aerospace Corporation in developing robotics software for autonomous space exploration.
- Incorporated object recognition packages for robotic autonomy in the system, enabling robots to navigate and identify objects in complex environments.
    - Created the dataset and trained the model, achieving an accuracy of 98% on a test set of images.

PUBLICATIONS

- Cavanagh, R. and Trajkovic, J., "**Simulation Environment for Modeling and Testing of Autonomous Assembly in Space for Multiple Robotic Arms**," SAE Technical Paper 2022-01-0012, 2022, doi:10.4271/2022-01-0012.

- Cavanagh, R. and Trajkovic, J., "**Value Prediction for Spatiotemporal Gait Data Using Deep Learning**," Paper Pending Review.

EDUCATION

California State University Long Beach August 2018 – May 2022
BS Computer Science - Department Outstanding Graduate

PROJECTS

Chess Game

- Developed a two-player Chess game with full support for en passant, castling, pawn promotion, check, checkmate, and stalemate logic.
- Used GDScript (Python) and the Godot Engine to develop the game.

Meeting Calendar App

- Developed a macOS app using Swift that retrieves events from the calendar, searches for meeting links, and automatically starts meetings.

SKILLS & LANGUAGES

- **Languages:** Ruby, React, JavaScript, TypeScript, Python, Java, C#, Swift, C++, XML, JavaScript, SQL, NoSQL
- **Backend Development**: Strong backend development skills, building both scalable and reliable APIs and microservices.
- **Web Development:** Strong web development skills, building both clean UIs and reusable middleware and component systems.
- **Project Management**: Experience driving large-scale projects in a fast-paced and highly collaborative environment.