Ryan Cavanagh

EDUCATION

California State University Long Beach <div align="right">August 2018 – May 2022</div>

BS Computer Science
- GPA 3.85
- 2022 Outstanding Graduate – Computer Science

WORK EXPERIENCE

American Express

Software Engineer Intern <div align="right">June 2021 – August 2021</div>
- Improved build times 80% by converting a Java repo from Maven to Gradle.
- Built, deployed, and presented new API to help developers access Elasticsearch data more securely and faster.
- Java; Maven; Gradle; Elasticsearch; Vert.x; JSON; Kibana

California State University Long Beach

Research Assistant (Machine Learning) <div align="right">January 2021 – Present</div>
- Composed CNN, RNN, and ensemble models to predict gait cycles from test individuals.
- Paper pending review.
- TensorFlow; Keras; Python; NumPy

Research Assistant (Robotics) <div align="right">November 2019 – March 2022</div>
- Collaborated with The Aerospace Corporation in developing robotics software.
- Incorporated object recognition packages for robotic autonomy in the system.
    - Created the dataset and trained the model.
- ROS; Gazebo; RVIZ MoveIt!; Python; XML; C++

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.

PROJECTS

Chess Game
- Two-player Chess game.
- Supports en passant, castling, pawn promotion, check, checkmate, and stalemate logic.
- Godot Engine; GDScript (Python)

Warehouse Inventory Program
- Object-oriented inventory program with database persistence.
- Supports purchases and adding and removing customers, employees, products, and warehouses.
- Java; SQL

Meeting Calendar App
- MacOS app
- Retrieves events from the calendar, searches for meeting links, and automatically starts meetings.
- Swift

SKILLS & LANGUAGES

- **Skills:** Quick Learner; Goal Oriented; Self Motivator; Dedicated
- **Languages:** Python; Java; C#; Swift; C++; XML; JavaScript; SQL; NoSQL