# Allan Paiz

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# SKILLS

- Programming Languages: C++, Python, Java, Bash
- Libraries: Pandas, NumPy, JUnit, Plotly, Matplotlib, Scikit-learn
- Tools: Neovim, VSCode, Microsoft Excel, Word, PowerPoint, LaTeX, Git, GitHub, Adobe Photoshop, Premiere Pro

## **EDUCATION**

B.S., Computer Science, Minor in Mathematics, University of South Carolina, 3.78 GPA

2023 - Present

President's Honor List: Fall 2023 Dean's Honor List: Fall 2023, Spring 2024, Spring 2025

#### Relevant Course Work:

- Data Structures & Algorithms: Algorithm design/analysis, problem solving, C++
- Software Engineering: OOP, design patterns, unit testing, Java, JavaFX, Git, GitHub
- Statistics: Probability, distributions, estimation, statistical inference, analysis of variance, regression, hypothesis testing
- Advanced Programming Techniques: C++ memory management, pointers, iterators, Linux/Unix environments
- Discrete Mathematics: Logic, proof techniques, recursion, combinatorics, probability
- Computer Architecture: Instruction sets, memory addressing, MIPS assembly

## SELECTED PROJECTS

• Defensive Stopping Power: 2024 NFL Big Data Bowl — Kaggle Competition

[Project Link] [Finalists Link]

- Focus: Python, machine learning, data analysis, visualizations, feature engineering, self-directed
- Description: Developed a feedforward neural network in Python to detect contact between ball-carriers and defenders using NFL player tracking data. Engineered a novel metric, Yards Allowed After Contact, to evaluate defensive performance for player scouting and game analysis.
- TuneUp by JETA: Software Engineering Course Team Project

[GitHub Link] [Demo Video]

- Focus: Java, version control, GitHub, collaboration, documentation
- Description: Worked as a team to develop a music application written in Java. I worked in an agile, iterative
  development process implementing design patterns, object oriented programming, and unit testing. I created
  documentation, system design diagrams, and used GitHub for version control.

## EMPLOYMENT

## **Advanced Data Collector**

MAY 2024 - Present

Pro Football Focus (PFF)

Remote

- I collected NFL and NCAA football player data focusing on speed, precision, and consistency. I have processed 12 full and 3 partial games identifying and recording over 116,930 data points.
- In the 2024 season I achieved a 99.5% player identification accuracy, 96.7% player position accuracy, and a 98.9% accuracy across all other data categories, validated through PFF's double-entry verification process.

# US Marine - Combat Engineer

MAY 2018 - OCT 2022

United States Marine Corps

Camp Pendleton, CA

- I used computer-based geographic information systems (GIS) to create and analyze maps and spatial data for mission planning and reconnaissance reporting.
- I served as a Sapper Leaders Course Instructor, mentoring and teaching Marine leaders through lecture and hands on training in mission planning, problem solving, and small unit leadership.
- I worked effectively in a variety of teams and challenging environments, including overseas deployments and advanced technical training.

## Technical Designer

JUN 2015 - DEC 2016

Production Resource Group

New Windsor, NY

- I collaborated with project managers to engineer solutions for entertainment scenery and machinery projects.
- I used AutoCAD for 2D and 3D modeling, meeting strict safety, functional, budget, and timeline constraints.

# AWARDS

- 2024 NFL Big Data Bowl Finalist My model and project was selected as one of the top ten submissions, earning a runner-up prize of \$5,000. [Kaggle Announcement] [NFL Announcement]
- 2021 Marine Corps Good Conduct Medal Outstanding performance and conduct during three years of continuous active enlisted service in the U.S. Marine Corps.
- **2021** Certificate of Commendation Outstanding performance of duty while serving as a seminar leader, Lance Corporal Leadership and Ethics Seminar Class 3-21.