

Jakson Coffin

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EDUCATION

University of Minnesota, Minneapolis, MN
College of Science and Engineering

Expected Graduation: May 2025

- Degree: Bachelor of Science in Computer Science - GPA: 3.6
- Relevant Coursework: Machine Learning (Python), Artificial Intelligence (Python), Data Science (Python), Software Engineering (Python), Data Structures and Algorithms, Computer Architecture (C, Assembly)

PROJECTS

Rocket League Reinforcement Learning Agents

Lead Developer & Analyst

- Engineered and trained high-performance reinforcement learning agents using Proximal Policy Optimization (PPO), achieving consistent performance across varied in-game scenarios over 1B+ training steps.
- Improved agent decision-making using custom rewards and training in Rocket League simulation environments.
- Leveraged Weights & Biases for experiment tracking, monitoring model performance across scenarios, and iterating on training strategies to drive continuous optimization and improvement of agent capabilities.

Esports Player Performance Prediction

Lead Developer & Analyst

- Built a scalable replay ingestion system using the Ballchasing API, optimizing data pulls within rate limits by prioritizing impactful matches and streamlining the process across thousands of replays.
- Fine-tuned SVM, Logistic Regression, and Random Forest models using standardized inputs, cross-validation, and feature importance to ensure reliable and consistent performance evaluation.
- Created statistical visualizations and performance comparisons to highlight key gameplay metrics, enabling professional esports teams to scout players, optimize rosters, and prepare effective strategies against opponents.

Scrimbot, Esports Club at University of Minnesota

Developer

- Developed a Discord bot for 35,000+ intercollegiate competitors, integrating Discord Gateway API via WebSockets for real-time scrimmage requests, enhancing scheduling efficiency and user engagement.
- Addressed SQL data storage inefficiencies, improving database query performance and reducing app downtime.
- Refined command response formatting using Markdown, improving the user experience and interaction clarity.

SKILLS

Technical Skills: Python, Java, C, C++, JavaScript, R, PyTorch, TensorFlow, Scikit-learn, NumPy, Pandas, Matplotlib, Seaborn, Jupyter Notebooks, PostgreSQL, Git, GitHub, VSCode, OpenAI Gym API, Jira, UML, Microsoft Azure

Soft Skills: Strong leadership, problem-solving, and the ability to communicate technical concepts to diverse audiences.

LEADERSHIP

University of Minnesota, Minneapolis, MN

Club President & Varsity Captain

- Manage and lead a 3,000+ member Rocket League esports club, overseeing team formations, tournament logistics, and hosting community engagement events to foster participation and club growth.
- Selected by Assistant Athletic Director as captain for the university's Rocket League varsity team, leading strategy development, player training, and competitive play at the highest collegiate level.
- Spearheaded fundraising initiatives, securing about \$20,000 to support the expansion of esports club operations.

WORK EXPERIENCE

HOM Furniture, Coon Rapids, MN

October 2020 – July 2021

Returns Associate

- Trained and mentored team members on best practices, optimizing workflows and improving the overall customer return process efficiency, while also assisting in other departments to support operational needs.