# Ajay Patel

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## EDUCATION

**University of California, Berkeley**                                              January 2025 – Present
*Master of Information and Data Science* – GPA: 4.00/4.00
- Relevant Courses: Research Design and Applications for Data and Analysis, Fundamentals of Data Engineering, Applied Machine Learning, Computer Vision, Machine Learning Systems Engineering

**University of Rochester**                                              August 2021 – December 2024
*Bachelor of Science, Data Science Major* – GPA: 3.99/4.00
- Relevant Courses: Tools for Data Science, Data Structures and Algorithms, Linear Algebra, Intro to AI, Database Systems, Data Mining, Statistical Modeling, Time Series Analysis
- Teaching Assistant in the Data Science department, leading study sessions and grading coursework

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## EXPERIENCE

**Pittsburgh Pirates,** Pittsburgh, PA                                              March 2025 – Present
Junior Data Scientist
- Owned development and deployment of machine learning models for pitch quality and defensive evaluation, leveraging regression and PyTorch to support player evaluation and in-game strategy
- Built scalable feature engineering and validation workflows, collaborating cross-functionally to ensure projects were interpretable, actionable, and used by technical and non-technical stakeholders

**Los Angeles Dodgers,** Los Angeles, CA                                              May 2024 – August 2024
Baseball Strategy and Information Intern
- Developed proprietary sliding metrics in Python and SQL from tracking data to enhance baserunning analysis
- Built a XGBoost model in R to analyze player development in MLB, creating takeaways for stakeholders

**Optum,** Basking Ridge, NJ                                              June 2023 – August 2023
Technological Development Program Intern
- Designed a React & Node.js web app to host behavioral therapy data, improving data accessibility for therapists
- Developed backend SQL integrations and API endpoints. Enhanced front-end using React, HTML, and CSS

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## EXTRACURRICULARS & PROJECTS

**University of Rochester Independent Studies,** Rochester, NY                                              August 2023 – December 2024
Research Assistant
- Analyzed political bias in AI image generation tools using Python, computer vision (DeepFace), and web scraping techniques
- Created a F1 race simulator to identify effective pit stop strategies using tree-based machine learning models

**NFL Big Data Bowl**, Indianapolis, IN                  November 2022 – March 2023 & November 2023 - February 2024
Finalist (2023) / Runner-Up
- Presented work on an expected pass rush metric using XGBoost analyzing team schemes at the NFL Combine
- Trained a PyTorch CNN to predict yards after the catch based on spatial data of all players and created subsequent scouting reports and team-analysis charts

**Exit Velocity Over Expected**, Warren, NJ                                              July 2022
Creator
- Trained a XGBoost model to predict exit velocities of batted balls in MLB and explained my methodology
- Created a Shiny App to host the resultant data and effective visuals made through ggplot2 and gt

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## SKILLS
- R, Python, SQL **|** Machine Learning {XGBoost, GLM, Regression, PyTorch, Scikit-Learn}
- Data Manipulation & Visualization {ggplot2, tidyverse, pandas, matplotlib, Shiny, Streamlit}