Naren Rachapalli

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Education

Purdue University | College of Science | West Lafayette, IN | August 2020 - May 2024
Bachelors of Science in Computer Science

Concentrations: *Artificial Intelligence, Database and Information Systems*
Student Activities: *Teaching Assistant - Data Mining I, ML @ Purdue - Mentor, and Chess Club - Member*

Relevant Coursework

Current: *Algorithms Analysis, Artificial Intelligence, Statistical Machine Learning, Systems Programming, Data Structures & Algorithms, Robotics, Computational Genomics, Discrete Math, Linear Algebra, and Probability*

Upcoming: *Distributed Systems, Parallel Computing, Natural Language Processing, and Applied Quantum Computing*

Technical Skills

Programming Languages: *Python, SQL, C/C++, Shell Scripting, and Git*
Data Science: *TensorFlow, PyTorch, Scikit-Learn, Pandas, Matplotlib, NLTK, and Grafana*
Cloud Computing: *AWS, Docker, Databricks, and MongoDB*

Professional Experience

Amazon | Redmond, WA | May 2022 - Aug 2022
Software Development Engineer Intern for Project Kuiper | *Python, AWS, Matplotlib, Seaborn, Grafana, and Docker*

- Designed statistical models improving validation efficiency by 70% through analyzing time-series telemetry data for hardware and software validation across satellite subsystems and test procedures.
- Integrated containerized model into the test automation framework for efficient testing of satellite subsystems.
- Developed dashboards to simulate orbital modem pass performance, identifying key areas for improvement.

Merck | West Lafayette, IN | Aug 2021 - May 2022
Undergraduate Data Science Researcher for Global Research | *Python, Flask, React, AWS, Docker, and Databricks*

- Deployed reliable containerized data visualization web app for efficient storage, parsing, and monitoring of legacy drug sample data to facilitate forecasting, reduce experimental redundancy, and expedite drug development.
- Improved sample labeling efficiency by 50% by generating unique QR codes to resolve double labeling issues.
- Operated Github, Slack, Jira, and Confluence for project management and team collaboration.

eAlliance Corporation | Naperville, IL | May 2020 - Aug 2020
Machine Learning Engineer Intern for Automation Solutions | *Python, Pandas, Scikit-Learn, NLTK, and UiPath*

- Engineered a natural language processing tool for automated extraction of purchase order numbers from emails.
- Integrated RPA into a larger system for automating shipping inquiries by retrieving shipping details from SAP improving customer inquiry response times tenfold to streamline the supply chain process.

Projects

Bitcoin Reinforcement Learning Trading Bot | August 2020 - May 2021
ML @ Purdue | *TensorFlow, Keras, Pandas, and NumPy*

- Established a profitable trading bot to optimize profits through strategic buying and selling, resulting in 74% ROI.
- Utilized deep reinforcement learning techniques, specifically a Deep Recurrent Q-Network with LSTM, to analyze historical bitcoin prices data with CUDA support.

First Tech Challenge Robotic Rover | June 2018 - August 2020
Personal Project | *Java*

- Founded and managed the team by overseeing paperwork, sponsorships, and workshops, while ensuring compliance with competition regulations and maintaining documentation to support future development.
- Programmed rover to navigate, detect, and collect minerals autonomously, resulting in top scores in competitions.