

Naren Rachapalli

nrachapa09@gmail.com | +1 (630) 280-4723 | nrachapa.github.io | linkedin.com/in/nrachapa | github.com/nrachapa | Naperville, IL

Education

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

Bachelors of Science in Computer Science

Concentrations: *Artificial Intelligence*

Relevant Coursework: *Artificial Intelligence, Data Mining and Machine Learning, Systems Programming, Data Structures & Algorithms, Discrete Math, Linear Algebra, and Probability*

Technical Skills

Languages: *Python, SQL, C/C++, HTML, CSS, Java, Shell Scripting*

Data Science: *TensorFlow, NLTK, Keras, Scikit-Learn, Pandas, NumPy, SciPy, Matplotlib, Seaborn, Grafana*

Other Technologies: *PyTest, AWS Cloud (S3, EC2, ECR, SageMaker), Docker, Git*

Professional Experience

Purdue Computational Quantum Electromagnetics Lab | West Lafayette, IN | August 2023 - Current

Undergraduate Research Assistant | *Python, NumPy, SciPy, Matplotlib*

- Spearheaded an algorithm for generating Hamiltonians matrices tailored to diverse quantum systems.
- Developed ordinary differential equations to effectively solve Schrödinger's equation for in-depth analysis of the quantum system dynamics.

Amazon Project Kuiper | Redmond, WA | May 2023 - August 2023

Software Development Engineer Intern | *Python, SQL, PyTest, AWS (S3, ECR), Docker*

- Pioneered a network anomaly detection test across layers and links into the production test automation framework.
- Generated dynamic data visualization dashboard utilizing data from antenna hardware and cloud services.
- Impacted satellite subsystems, production environment test procedures, and mission operations procedures.
- Presented vital statistical insights on network traffic patterns to Amazon Project Kuiper leadership.

Amazon Project Kuiper | Redmond, WA | May 2022 - August 2022

Software Development Engineer Intern | *Python, SQL, Grafana, AWS (S3, ECR, Sagemaker), Docker*

- Designed statistical models to validate hardware and software across satellite subsystems by analyzing time-series telemetry data.
- Implemented forecasting and interpolation techniques, resulting in a 70% improvement in validation efficiency.
- Developed dashboards to simulate orbital modem pass performance, identifying key areas for correction.

Merck | West Lafayette, IN | August 2021 - May 2022

Undergraduate Data Science Researcher | *Python, SQL, Flask, React, AWS S3, Docker*

- Deployed reliable data visualization web app for efficient monitoring of geo-location and drug formulation data.
- Resolved double labeling issues to expedite drug development, and reduce experimental redundancy by 50%.

eAlliance Corporation | Naperville, IL | May 2020 - August 2020

Machine Learning Engineer Intern | *Python, Pandas, Scikit-Learn, NLTK, UiPath*

- Engineered a natural language processing tool to extract purchase order numbers from email with google sheets extension for training.
- Integrated RPA solution to automate SAP data retrieval and generate personalized email responses, resulting in 20% faster inquiry resolution.

Projects

Bitcoin Reinforcement Learning Trading Bot | August 2020 - May 2021

Python, TensorFlow, Scikit-Learn, Keras, Pandas, NumPy

- Established a profitable trading bot to optimize profits through strategic buying and selling in real time using api endpoints, resulting in 74% ROI.
- Devised a strategy to buy or sell using advanced deep reinforcement learning techniques, specifically a Deep Recurrent Q-Network with LSTM, to analyze historical bitcoin prices data.