

Raman Saparkhan

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EDUCATION

- **Carnegie Mellon University** Doha, Qatar
 - *Bachelor of Science in Computer Science, Dean's List* Aug. 2022 – May 2026
 - **Relevant Coursework:** Machine Learning, Distributed Systems, Parallel & Sequential Data Structures and Algorithms, Linear Algebra, Multivariate Calculus, Great Theoretical Ideas in CS

EXPERIENCE

- **Amazon Web Services (AWS)** Seattle, WA, USA
 - *Software Engineer Contributor* Mar 2023 - Present
 - Proposing robust & efficient software solutions for the **OpenSearch** project **Python** & **ML** libraries.
 - Actively participating in writing audit and guides resulting in increased contributor engagement.
 - Adding support for local APIs enhancing data backup, recovery, management & operational efficiency.
 - Selected as a featured speaker at **OpenSearchCon 2023**, presenting on the transformative journey through the College Contributor Initiative (CCI) experience.
- **Qatar Computational Research Institution** Doha, Qatar
 - *Software Engineer Intern* Dec 2022 - Mar 2023
 - Developed a cross-platform **Flutter** app for businesses to organize files using tags & categories.
 - Engineered login page refreshing & redirecting feature, and a robust tags & category system.
 - Migrated app to null-safety, conducted tests on **Android Studio**, improving app stability by **20%**.
 - Utilized **Version Control** and **Azure DevOps**, reducing conflicts and increasing code quality.
- **Carnegie Mellon University, CS department** Doha, Qatar
 - *Course Assistant for Python Course* August 2022 - Nov 2022
 - Assisted professor teaching course material via office hours, 1:1 sessions and mentor meetings.
 - Mentored 6 students throughout their final projects, leading to special recognition from the instructors.
 - Developed individual performance strategies, resulting in high course grades for over 10 students.

PROJECTS

- **Real-time Stock Predictor** | *Python, PyTorch, FinBert, FinGPT, NLTK, Selenium, Pandas, Scikit-learn*
 - Increased accuracy of data by **35%** by employing **Selenium** for direct data scraping and extraction.
 - Implemented ensemble machine learning models, achieving **82%** precision on a mid-sized dataset.
 - Made a complex analysis of model strengths & weaknesses, currently working on developing a fully autonomous trading bot empowered by **NLP & ML models** and **Bloomberg Terminal**.
- **SQL Query Generator** | *React, Node.js, Express, CSS, ChatGPT API*
 - Developed full-stack app with **Node.js** & **Express** to convert natural language to SQL queries.
 - Built a user-friendly interface with **React** for real-time SQL query generation for non-technical users.
 - Enhanced backend integrating **ChatGPT API** for efficient natural language processing performance.
- **FileStack** | *Java, Java RMI, TCP/IP*
 - Engineered a Distributed File System (**DFS**) in Java to address storage scalability challenges.
 - Enhanced client-server communication using Remote Invocation (**RMI**) & Procedure Call (**RPC**).
 - Utilized concurrency, synchronization & multi-threading, boosting system reliability & performance.

TECHNICAL SKILLS

- **Languages:** Python, C/C++, Dart, Rust, Java, HTML, CSS, JavaScript
- **Tools:** Git, Selenium, Android Studio, HTTP, Docker, Pandas, OpenCV, PyTorch
- **Technologies:** Node.js, Flutter, Azure, Bootstrap, React, Express, Scikit-learn