Amogh Sarangdhar

Graduate Student at University of Pennsylvania (US Citizen)

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EDUCATION

University of Pennsylvania Philadelphia, PA
Master of Science (M.S) in *Computer Science* (Aug 2024 - May 2026)

Rutgers University New Brunswick, NJ
Bachelor of Science (B.S) in *Computer Science*; Dean's list; GPA: 4.0/4.0 (Sep 2020 - May 2024)

TECHNICAL SKILLS

- **Languages**: Java, Python, C++, C#, C, Javascript, MySQL, MATLAB
- **Tecnologies**: Android Studio, JSP, XML, JSON, Git, Github, LaTeX, CSS, HTML, JavaFx
- **Libraries & Frameworks**: .NET, React, NumPy, Pandas, PyTorch, Matplotlib

EXPERIENCE

United Parcel Service (UPS) **Jan 2023 – May 2024**
Software Engineering Intern Parsippany, NJ

- Designed **serialization & deserialization** routines in C++ & C# handling 5000+ objects which improved **JSON** throughput by 20% as measured by processing 10k requests.
- Implemented data pipelines between 5 distributed systems in **C++ & C#** reducing latency by 90% as measured by 100+ transactions.
- Implemented robust **error-handling strategies** for handling exceptions, invalid data, and compatibility issues enhancing overall system reliability by **20%**.

Yale Careers CyberTeam Research **Jan 2023 – Sep 2023**
Machine Learning Software Engineering Intern Remote

- Developed machine learning model in python for **bias detection** in datasets which improved model fairness by 25% impacting 1 million users.
- Deployed ML model using tensorflow for structured data improving **accuracy by 3%** over baseline impacting over 50k predictions.

Rutgers University **Sep 2022 – Jan 2023**
Software Engineering Intern | Aresty Research Center New Brunswick, NJ

- Built a collection of **correctly rounded math libraries** for various representations (eg.,32-bit float, posits, bfloat16, tensorfloat32) for multiple rounding modes, increasing computational accuracy by **15%**.
- Developed polynomial approximations using the **RLibm** approach, optimizing the performance of elementary functions for over **100,000** input variables.

PROJECTS

Image Clustering Machine Learning Project **Sep 2023 - Dec 2023**

- Applied k-means clustering on **1700+** low-resolution images using sklearn, effectively grouping them into similar image clusters.
- Analyzed clustering accuracy and identified optimal cluster counts, achieving a **10%** reduction in clustering errors.

Dynamic Auction System **Sep 2022 - Dec 2022**

- Designed a secure web application for auctions using **JSP** and **MySQL** with advanced features like automatic bidding and tracking
- With over **6000+** lines of code, users can create auctions, browse through available items, place bids, manage listings, sort items based on preference etc.

OrderSwift Customizable Cafeteria **Jan 2022 - May 2022**

- Developed an Android Application for a cafeteria in **Android Studio** framework using **Java** and **object-oriented** techniques with over **5000+ lines of code**.
- The app provides **customizing capabilities**, enabling users to sort their orders by name, type, or price, facilitating quick and easy order management.

ACADEMIC ACHIEVEMENTS

- National Science Foundation **(NSF)** Research Grant, **Award Number: 2018873**, issued by **Yale University**
- **MLH Prize - Best Space App** powered by Space Force issued by **Cornell University** at BigRedHacks'21
- **Scarlet Scholarship**: for demonstrating exceptional academic performance - **Top 1%** CS students **(Dean's List)**

RELEVANT COURSEWORK

Analysis of Algorithms, Computer Architecture, Numerical Analysis, Database Management, Data Science, Machine Learning, Software Engineering, Operating Systems, Internet Web Systems