Amogh Sarangdhar

University of Pennsylvania (US Citizen)

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EDUCATION

University of Pennsylvania — Philadelphia, PA
Master's in Computer Science *(AI/ML Specialization)*; **GPA: 3.8/4.0** — (Expected May 2026)

Rutgers University - New Brunswick — New Brunswick, NJ
Bachelor's in Computer Science; **GPA: 4.0/4.0** — (Sept 2020 - May 2024)

SKILLS

Languages: Java, Python, C++, C#, C, Javascript, Typescript, MySQL, MATLAB
Technologies: Android Studio, JSP, XML, JSON, Git, Github, HTML, CSS, JavaFx, JUnit
Libraries & Frameworks: AWS, React, NodeJs, ExpressJs, jQuery, .NET, NumPy, Pandas, PyTorch, Unix/Linux

EXPERIENCE

Amazon — Software Engineer Intern — Seattle, WA **(May 2025 – Aug 2025)**

- Migrated feature toggle system from legacy Dynamic Features to AWS's Feature Management Service (FMS), reducing deployment latency to customers by 30%.
- Architected the integration of FMS within the CI/CD pipeline, enabling scalable & quick feature flag deployment.
- Automated releases, with rollout plans across several AWS regions cutting manual configuration and rollout errors by 50%.
- Created CloudWatch alarms in TypeScript to track stable features, ensuring timely cleanup of 100+ unused feature toggles.

UPS — Software Engineer Co-op / Intern — Parsippany, NJ **(Jan 2023 – May 2024)**

- Engineered serialization & deserialization routines in C++ & C# to replace manual JSON handling for 5,000+ nested objects, increasing throughput by 20% across 10k+ .NET API requests.
- Built multi-threaded data pipelines across 5 distributed systems, reducing transaction latency by 90% during peak operations.
- Implemented structured error-handling for invalid JSON inputs and system exceptions, improving backend reliability by 20%.

Yale University — Machine Learning Engineer Intern — Remote **(Jan 2023 – Sept 2023)**

- Developed a Python-based machine learning model for bias detection in structured datasets, identifying unfair patterns to improve fairness across data affecting over 1 million users.
- Applied selective randomization techniques to mitigate bias, boosting fairness across racial demographic groups by 50%.
- Increased model reliability by 3% by deploying a TensorFlow solution that enhanced prediction accuracy on 50k+ records.

Rutgers University — Software Engineer Intern — New Brunswick, NJ **(Sept 2022 – Jan 2023)**

- Built a collection of correctly rounded math libraries for multiple representations, increasing accuracy by 15%.
- Created polynomial approximations using RLibm, optimizing elementary functions for 100k+ input variables.

PROJECTS

PennSearch: A DHT-based Peer-to-Peer Search Engine

- Designed a peer-to-peer search engine with over 200-node Chord DHT in C++ for distributed keyword-based querying.
- Indexed 10,000+ documents via inverted lists, ring stabilization & finger tables boosting search accuracy by 15%.
- Supports multi-keyword queries across a simulated Chord overlay network, reducing average lookup time by 30%.

Image Clustering Machine Learning Project

- Clustered 1,700+ low-resolution images using k-means and sklearn, achieving a 90%+ purity score in image grouping.
- Reduced misclassification errors by 10% by optimizing cluster counts with silhouette analysis.

Dynamic Auction System

- Developed a secure, JSP-based auction platform with MySQL integration, enabling real-time bidding, efficient item tracking, and streamlining auction creation.
- Engineered auction workflows – supporting item creation, bidding, and dynamic sorting across 6000+ lines of code.

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).