Jan Ahmed

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EDUCATION

University of Delaware   Newark, DE
B.S. in Computer Science and B.S. in Applied Mathematics; Cum Laude (GPA: 3.94/4.00)   Sep. 2020 - May 2024
  – Relevant CS Coursework: Grad Machine Learning, Grad Artificial Intelligence, Grad Data Mining, Algorithms

  – Relevant Math Coursework: Grad Stochastic Processes, Grad Probability, Grad Combinatorics, Optimization

  – Co-Founder and President of the Competitive Programming Club

Charles University   Prague, Czech Republic
Financial Mathematics   Sep. 2019 - May 2020
  – Relevant Math Coursework: Linear Algebra (I & II), Mathematical Analysis (I & II), Introduction to Finance

EXPERIENCE

Amazon Web Services   Herndon, VA
Software Development Engineer I   Oct. 2024 - Present
  – Developing and maintaining the Policy Data Service in AWS Organizations using the AWS SDK for Java.

  – Launched Resource Control Policies across multiple AWS regions.

  – Refactored components of AWS Organizations to support new Delegated Administrator features.

University of Delaware   Newark, DE
Researcher   Jun. 2022 - May 2024
  – Conducted research in graph theory, focusing on graph properties and their spectral characteristics.

  – Developed algorithms to significantly improve the known lower bounds of the independence number of certain graphs.

  – Established and validated a lower bound for disconnecting vertex sets in Hamming graphs.

Amazon Web Services   New York, NY
Software Development Engineer Intern   Aug. 2022 - Nov. 2022
  – Enhanced AWS Glue dashboard with an ETL job metric tracker, improving data monitoring capabilities.

  – Developed a data freshness monitoring tool using Apache Spark in Scala, to ensure up-date data in ETL jobs.

University of Delaware   Newark, DE
Researcher   Jun. 2021 - Jun. 2022
  – Conducted research in No-slip Billiards, co-authoring 2 research papers that explore the dynamics of billiard systems.

  – Developed and implemented algorithms in Python to verify hypotheses and analyze simulations of billiard systems.

PROJECTS

Senior Design Project (Capital One) ⬈   *AWS*
  – Implemented and trained a random forest classifier for fraud detection hosted on Amazon SageMaker. Developed and
    pentested a secure architecture using AWS Lambda, Amazon API Gateway, and AWS Shield for API protection.

KapperAI ⬈   *React.js, Google Cloud*
  – Placed top 8 overall hacks at PennApps 2023 (University of Pennsylvania) and won the *Wolfram Research Award*.
    Developed a mobile application that uses a machine learning model to transplant hair onto a user's selfie.

HoloFlash ⬈   *React.js, Unity, Google Cloud, MongoDB*
  – Earned first prize for *Best Use of AI in Education* at HenHacks 2024 (University of Delaware). Created an app that
    turns handwritten notes and lecture recordings into personalized flashcards, viewable in AR using Microsoft HoloLens.

HONORS AND AWARDS

  – William Clark Prize (outstanding senior majoring in mathematics at the University of Delaware)

  – 2024 George Mason University Calculus Olympiad team competition winner

  – Top 970 Putnam