Kunal Dutta

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PROFESSIONAL EXPERIENCE

SoFi | San Francisco, CA
Software Development Engineer (Bank)   July 2022 - Present
- Automated the wire validation process to reduce 2-5 hours per week of manual engineering effort.
- Implemented monitoring on Datadog, to track wire processing latency and status, to automate reconciliation.
- Transferred personally identifiable information (PII) in the NACHA processing system to an encrypted cloud file.
- Implemented a streamlined API, enabling efficient updates to files stored in the cloud.
- Designed the user interface (UI) and backend functionality for payment operators, reducing 3-5 hours per week of engineering.
- Tools Used: Java (Spring Boot, JavaMail), Kotlin, Amazon Web Services (S3, DynamoDB), Datadog

SoFi | San Francisco, CA
Software Engineer Intern (Big Data Infrastructure)   June 2021 - August 2021
- Integrated Terraform into SoFi to securely provision cloud resources and databases.
- Significantly reduced manual intervention by automating resource creation, ensuring consistency across projects.
- Tools Used: Terraform, Snowflake, Amazon Web Services (CloudFormation, S3, Secrets Manager), GitLab

University of California, Berkeley | Berkeley, CA
Course Tutor   September 2020 - December 2020
- Facilitated learning by teaching introductory programming skills using Python, SQL, C, and Assembly code.
- Moderated tutorial sections and held office hours to provide additional assistance and clarify concepts in a smaller group setting.
- Developed and presented instructional materials, making complex concepts accessible to diverse learners.
- Assisted in the evaluation of students' understanding through assessments and feedback sessions.
- Courses Taught: The Structure and Interpretation of Computer Programs, Computer Architecture, Foundations of Data Science

EDUCATION

University of California, Berkeley   May 2022
Bachelor's of Arts, Computer Science
Relevant Coursework: Algorithms; Data Structures; Operating Systems; Artificial Intelligence; Databases; Optimization; Robotics; Data Science
Activities and Societies: Delta Kappa Epsilon, Cal Mic Men, Sports Analytics Group at Berkeley, Open Computing Facility

PROJECTS

Smart Surveillance System | Engineering Project
https://github.com/kdutta9/Smart-Surveillance
- Implemented real-time motion detection system that alerts a user with Twilio API and sends the footage via cloud storage.
- Built hardware systems with Raspberry Pi and cameras, which deployed to an 18-house neighborhood.
- Tools Used: Python, OpenCV, Twilio API, Amazon Web Services (S3), Raspberry Pi

Basketball Shot Tracker Application | Programming Project
https://github.com/kdutta9/ShotTracker
- Created an Android application that can detect basketballs and hoops, and count shots missed and made.
- Trained custom TensorFlow Lite model using YOLOv4 real-time object detection and cloud computing (Google Cloud).
- Tools Used: Python, Java, TensorFlow Object Detection API, YOLOv4, Google Cloud Platform

Daily Basketball Fantasy Projections | Club Programming Project
https://sportsanalytics.berkeley.edu/fantasyprojections
- Designed and built web pages that display projection data for fantasy basketball, updating daily via cron job.
- Implemented filters to search via player name, position, and team, using JavaScript functions on a result table.
- Tools Used: Python, Pandas, HTML, CSS, JavaScript, Shell

SKILLS

Languages: Java (Spring Boot, JavaMail), Kotlin, Python (OpenCV, Pandas), C, Shell
Technologies: Amazon Web Services (CloudFormation, S3, DynamoDB), Datadog, Terraform, Snowflake