CAT NGO

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EXPERIENCE

Software Development Engineer, II – Remitly 10/01/21 – Now
Fraud Prevention/Remittance Risk Orchestration Team

- Designed and implemented the Enhanced Due Diligence (EDD) framework that relies on a customer's risk rating. EDD allowed Remitly to removes the legacy Tier Limits framework that presented high friction to customers who wanted to send high volume. When rolled out, EDD increased the net send amount from customers by 6 to 8%.
- Partnered with Fraud analysts to deliver necessary data to stop emergent fraud attacks.
- Designed and implemented an event-driven architecture (leveraging AWS SQS and Goroutine) to consume and write customer's data into our graph database (AWS Neptune) as part of a company-wide effort to decouple from reading legacy RDS instance.
- Implemented the user experience in Typescript and React-Native that allows customers to directly call Customer Service from our app when their transaction has been in review for longer than two hours, leading to a 13% increase in transaction completion rate.
- Implemented and released the functionality (written in PHP), allowing Customer Service agents to temporarily disable Multi-Factor Authentication (MFA), making MFA not being permanently disabled for the customer and increasing our customer's account security and protecting them from an Account Takeover attack.

Software Development Engineer, I – Remitly 02/16/21 – 09/30/21
Fraud Prevention Team

- Optimized a data extraction job in Scala by using a Spark custom incremental extractor, reducing the daily run time from 12 hours to less than 1 hour.
- Implemented Prometheus alarms to support program managers and analysts in detecting early warnings of fraudulent activity, saving an estimated $400k of losses in 2021.
- Migrated Fraud systems to Kubernetes and AWS EKS cluster, leading to cost reduction (saving an estimated $20k per year) and better scalability of our systems as well as complying with Security and Compliance policy.
- Mentored a Software Engineer Intern and supported him in ramping up and delivering impactful project, leading to him accepting the offer to return to the team as a full-time engineer.

Software Development Engineer, I – Remitly 07/21/20 – 02/15/21
Customer Transaction Accounting Processing Team

- Optimized a Go worker process writing disbursement data by using a memory profiler (pprof) and reduced the runtime by 7 hours as well as making the process more resilient to failures.
- Implemented and wrote rigourous integration testing for the improved loss logic state machine (written in Go), which processes 24 million financial events every day to accurately identify accounting loss.
- Implemented functionality to emit events indicating accounting loss by integrating a Go service with existing Flink-SQS event pipeline.
- Documented and diagrammed the complex state machine for identifying accounting loss using LucidChart and hosted knowledge-sharing sessions with the team.

Software Development Engineer, Summer Intern – Remitly 06/17/19 – 08/30/19
Pricing Team

- Implemented API endpoint in Java to fetch history of pricing rules and designed the UI using Javascript and Node to reference that history, leading to greater ease-of-use and productivity for pricing analysts to set offered exchange rates.
- Implemented dimensioned scrapers in Python that retrieved pricing data from competitor, increasing data processing throughput by 5 times as measured by the number of queries per day.
- Redesigned the representation of pricing quote to allow for better readability of the economics logic behind a quote.
- Developed AWS RDS relational database that persisted transaction quotes and integrated it with PHP platform codebase, allowing for after-the-fact access of the pricing quotes of enqueued transactions.

EDUCATION

Harvey Mudd College *Graduated May 2020*
Joint Computer Science and Mathematics (B.S.) *Major GPA 3.835*

SKILLS

Programming Languages: Go, Kotlin, Scala, Python, Java, C++, SQL, Typescript, JavaScript, PHP, Haskell, Prolog, Racket, R, HTML/CSS
Software Libraries: AWS SDK, Spark, Pprof, JDBI, Lombok, Jackson, Numpy, Scikit-Learn, React
Utilities: AWS (SQS, RDS, DynamoDB, Redshift, S3, Flink), Prometheus, Jenkins, Docker, Gradle, Maven, LaTeX, Kubernetes, Git, Tecton