Alex Haynes

Software Engineer
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Experience

Two Sigma Insurance Quantified Aug 2019 - Dec 2023

Team: Data Services - Software Engineer Sep 2021 - Dec 2023

- End-to-End Feature Ownership:
  - Spearheaded the full lifecycle of feature development, from identifying client pain points through direct interface to crafting tailored solutions & ensuring seamless client onboarding.
- PDF Document Export Integration:
  - Developed & integrated a feature for exporting PDF documents compatible with ConceptOne and ImageRight, enhancing document management efficiency.
- API Enhancement for Bidirectional Data Flow:
  - Developed an API to enable bidirectional data exchange, facilitating seamless data integration between our system & external platforms.
- Automated Application Routing System:
  - Innovated an automated system for processing applications; it included tagging for straight-through processing, bundling ingested documents & executing auto-email dispatch to counterparties on behalf of clients.

Team: Product Platform - Software Engineer Aug 2019 - Sep 2021

- IQPL DSL Compiler: Developed a statically-typed, purely functional DSL for modeling insurance products & computations as a dependency graph compiled into protobufs. Developed language features & execution environment for compiled products.
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Ethereum Foundation Feb 2019 - Jul 2019

Development Grant Recipient - py-libp2p

- Built the Python implementation of libp2p, a peer to peer networking library from Protocol Labs. py-libp2p is currently used in all major Python ETH2.0 clients.
- Development efforts were directly funded by the Ethereum Foundation Grants Program.

University of Pennsylvania Aug 2016 - May 2019

Teaching Assistant

- CIS 240 Computer Systems (Intro C & Circuits), CIS 331 Networks & Security, CIS 380 Operating Systems, CIS 548 Operating Systems (Graduate Level)

Two Sigma Summer 2018

Team: Legal and Compliance Engineering - Intern

- Developed ETL pipelines to monitor the firm's live trading feed for anomalies that could indicate illegal activity within the firm. This was used to power a forensic analysis tool used by the legal team, and interfaced directly with end users to develop the project to fit their needs.

Education

University of Pennsylvania

BSE in Computer Science 2019

- Minors: Math, Data Science, Fine Arts
- Magna Cum Laude
- Dean's List 2017-2019
- IEE Eta Kappa Nu Honors Society

Skills

Languages

Python, Typescript, Javascript, Java, C, SQL

Libraries & Technologies

React, GraphQL, Flask, Redis, Kubernetes, Spark, Pandas, Redshift, Terraform

AWS

Athena, Glue, Step Functions, Lambda, SNS, SES, EKS, IAM

Side Projects

Clothing Brand - Utility Materials Inc.
Game Development - 2D rogue-like platform fighter built in GameMaker Studio