RASHAD PHILIZAIRE

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EDUCATION

Turing Scholar CS Honors, University of Texas at Austin

B.S Computer Science | 📅 May 2024

- **Selected Coursework:** Cloud Computing, Artificial Intelligence, Natural Language Processing, Computer Architecture*, Data Structures*, Operating Systems*, Info Retrieval & Search, Software Engineering, Algorithms & Complexity (* **Indicates Honors**)

EXPERIENCE

Stripe

Software Engineering Intern | 📅 May 2023 - Aug 2023

- Achieved an **~85%** reduction in engineering costs of adding an External Payment Method to Stripe through strategic refactoring
- Unblocked Stripe adoption by enabling merchants to integrate with **60** previously unsupported payment methods
- Reduced operational costs for Stripe by leveraging **Apache Airflow** and **Spark** to create a data pipeline for financial partners
- Enhanced scalability of the third-party payment method platform by using **Protobuf** and **gRPC** to expose self-serve settlement data
- Enabled Stripe to enforce partner settlement SLA by using **Java** to automate settlement calculations adaptable to any country

Meta (Facebook)

Meta University Intern | 📅 Jun 2022 - Aug 2022

- Tarrare - Developed a full-stack app using to connect students on campus for food deliveries
- Implemented a real-time order and delivery matching system, providing live updates with **GraphQL Subscriptions**
- Optimized location services by integrating **Google Places/Routes** APIs for restaurant/building locations and distance calculations
- Serving a **GraphQL** API written in **Typescript** that queries a **PostgreSQL** database for users, restaurants, conversations, and orders

Yext

Software Engineering Intern | 📅 Jun 2021 - Aug 2021

- Created a system to automatically store webhooks for clients using the Yext Pages' **Git** version control to allow for data recovery
- Developed file sharing service using **React** and the Monaco Editor API for the Yext Pages' code editor
- Optimized loading times of widgets by refactoring **gRPC** clients' initialization

Google

Computer Science Summer Institute | 📅 Jul 2021 - Aug 2021

- Created a pose comparison video streaming application using **ml5js** PoseNet
- Delivered a collaborative final project presentation that included a live demonstration to Google employees and community leaders

PROJECTS

Vision | *Django Rest Framework, Celery, Redis, Docker, PostgreSQL, React Native*

- Developing a community platform for students seeking professional opportunities using **Django Rest Framework** to create an API
- Utilized **Celery** to update popularity score of posts asynchronously, improving the overall scalability of the platform
- Implemented **Redis** as both a message broker and an in-memory cache to minimize latency for retrieving popular posts
- Containerized the application and all dependencies using **Docker Compose**, streamlining deployment

Personal AI Knowledge Base | *PostgreSQL, PGVector, Python, GPT-3.5*

- Developing a self-organizing personal knowledge base powered by word embeddings and large language models
- Utilized **PostgreSQL** with **PGVector** for efficient storage and retrieval of word embeddings
- Implemented Retrieval Augmented Generation **(RAG)** techniques, leveraging GPT-3.5 for intelligent Q&A on personal notes
- Addressed note retrieval challenges by incorporating **semantic search** to enhance content discovery

Partial Python Compiler | *OCaml, LLVM*

- Penne - Used **OCaml** to create a partial compiler for Python that supports indentation standards, functions with arguments, conditional branches, loops, and arithmetic
- Converts Python code into tokens, builds an Abstract Syntax Tree (AST), traverses AST to generate **LLVM** bitcode
- **LLVM** bitcode is converted to machine language, in cases leading to a **50x** speedup when compared to interpreted Python

SKILLS

Languages: Python, Java, C++, Rust, Typescript/Javascript
Other: Spark, Django, Redis, Docker, PostgreSQL, GraphQL, Flask, React