



Ayush Patel

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EDUCATION

Rutgers University, New Brunswick - Honors Program

Sep 2020 - May 2023

B.S in Computer Science; GPA: 3.82

Courses: Systems Programming, Distributed Systems, Operating Systems, Data Structures, Discrete Mathematics, Design & Analysis of Algorithms, Computer Architecture, Software Methodology

EXPERIENCE

Capital One

Jun 2022 - Aug 2022

Software Engineering Intern

New York City, NY

- Architected a KPI Dashboard used to boost engineering throughput, enhance decision making, and provide usage statistics on 6 REST APIs and other engineering measurables across 3 engineering teams, utilized by 20+ engineers daily
- Devised a **Python REST API microservice** hosted through an **AWS Lambda** function and called **500+ times daily** with endpoints curated to deliver statistics about credit card branding data by querying **Snowflake** and **DynamoDB**
- Built an **ETL pipeline** processing **2+ TB** of credit card product, policy, and segment data by deploying intervalled batch jobs running on **AWS EMR** clusters using **Apache Spark**, resulting in consistently updated KPI metrics on dashboard
- Engineered a responsive KPI Dashboard page using React, displaying metrics by using the various microservices created

Appriss

Jun 2021 - Aug 2021

Software Engineering Intern

Irvine, CA

- Utilized **C#, Azure, and SQL** on the Retail team to manipulate customer transactions and build models on the .NET framework, working with **5,000,000+** customer returns from F500 retailers such as The Home Depot and Bass Pro Shops
- Rebuilt a highly parallelized testing infrastructure for a real-time transaction processing system, **increasing speed by nearly 250%**, capable of replaying a customers transaction history from reconstructed database entries to build models
- Scaled testing framework horizontally by creating 20+ containerized instances of worker microservices using **Docker** to read customer transaction histories and generate model results by utilizing REST API requests, maximizing CPU load for speed

Rutgers University Learning Center

Sep 2021 - Present

CS111: Introduction to Computer Science Teaching Assistant

New Brunswick, NJ

- Organized study groups and built recitation lectures to teach 58 students OOP principles and fundamental coding practices
- Lead and facilitated interesting discussions regarding computer science and provided students with support in creating strong foundational computer science skills by evaluating student performance and curating lessons to bolster understanding

AWARDS

"Schwordle" — HackRU 2022 Winner — "Best Use of Twilio" and "Maverick Track"

Apr 2022

TypeScript, Next.js, React, Prisma, CockroachDB, Twilio

- Verified Wordle texts and created Wordle groups through Twilio SMS API, allowing users to play and share Wordle scores
- Displayed daily Wordle of each group member and created wordle challenges on a group-specific dashboard to compete with your friends, implemented using Next.JS, React, and TypeScript while hosting group and messaging data on CockroachDB
- Implementing group achievements and Wordle Hot Streaks alongside dashboard to show fun statistics to Schwordle groups

PROJECTS

Interactive Calendar

May 2021

JavaScript, React, npm, Webpack

- Engineered an intuitive and lightweight react component including an interactive calendar synced with a graph allowing for data analyzed value tracking with fast input and deployed as a package for public use, accumulating **500+ downloads**
- Deployed graph to automatically sync with calendar, allowing for instant data rendering and graphical view of calendar

Rutgers Course Sniper

May 2022

Python, AWS

- Produced python script to routinely call a reverse-engineered Rutgers Course API, tracking open courses and sending notifications **30% faster** than any other Rutgers course sniper, making it easy to get desired classes as they open
- Utilized an AWS EC2 Linux instance to run script on an interval through a cron job with environment variables and using AWS Cloudwatch to track script usage and success rate, allowing for a maximization course searching efficiency
- Directed notifications using Twilio, notifying users with an SMS message to get desired class section as fast as possible

SKILLS

Languages: Java, Python, TypeScript / JavaScript, C#, C

Frameworks/Other Skills: Next.js, React, .NET Core, Docker, Git, SQL, PostgreSQL, Azure, AWS, Prisma, Spring, Linux, Maven, HTML, CSS