

Himanshu Shishir Shah

(Current CS graduate student | Software Engineer with 2 years of experience)

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EXPERIENCE

Viant Technology, Irvine, CA

Jun 2023 – Dec 2023

Full Stack Intern | [read more](#)

- Developed a feature for extracting audio from videos using AWS MediaConvert, SNS, DynamoDB, and EventBridge to increase the bid eligibility of video creatives; achieving an estimated lift of **25%** in generated revenue
- Saved **8+** engineer hours (per use) by automating the process of adding new third-party segments using Angular, Golang, AWS Lambda, APIGateway, and S3
- Improved performance of existing Python scripts by **30x** on average using Codon, reducing costs by at least **15x**

Visible Alpha, Mumbai, India

Mar 2022 – Jun 2022

Software Engineer 2, Data Feed and APIs | [read more](#)

- Engineered the framework for adding Snowflake as a data delivery channel using Falcon, Python, and MySQL, increasing the generated revenue by **45%** and reducing the Time To Value
- Built APIs to reduce the average tech-support turnaround time by **80%** from **10** to **2** minutes
- Revamped the file dispatcher microservice to reduce the number of open SSH connections by **5x** using Paramiko
- Implemented a dashboard to report daily file generation and dispatch metrics to aid Support Team in monitoring failures

Visible Alpha, Mumbai, India

Jun 2020 – Feb 2022

Software Engineer 1, Data Feed and APIs | [read more](#)

- Migrated the existing monolithic ETL application to a microservice-based implementation, delivering high-volume, real-time data to clients with low latency, using Django, MongoDB, and Redis, driving \$2 million in revenue
- Optimized file dispatch latency by **80%** using RabbitMQ & Celery for asynchronous task execution (**60** to **10** seconds)
- Designed and added REST APIs and AWS S3 as data delivery channels to ease data consumption for clients
- Solved complex performance problems by resolving production issues, gaining exposure to dealing with large-scale software design issues, and avoiding performance bottlenecks

IIT Bombay, Mumbai, India

Oct 2019 – Jun 2020

Research Intern, Front-End for Synergistic Program Analyzer (SPAN) | [read more](#)

- Devised a high-level language (*specDFA*) to allow non-programmer users to specify data flow analyses intuitively
- Implemented a transpiler using ANTLR and Java to convert *specDFA* to Python and integrated it within SPAN
- Researched existing literature to learn about static program analyzers and data flow analysis such as Liveness Analysis, Available Expression Analysis, etc.

Mastek, Navi Mumbai, India

Jun 2019 – Jul 2019

Project Trainee | [read more](#)

- Developed an internal help-desk mobile app using Angular 8, MySQL, HTML, and CSS, allowing employees to log trouble tickets more conveniently than its desktop counterpart. Used Apache Cordova to convert it to a mobile app
- Added a search functionality within the app to allow employees to easily find the tickets they raised

EDUCATION

University of California Irvine, Irvine, CA

Sept 2022 – Dec 2023

Master of Computer Science | Course Assistant for Computer Networks (EECS 148) | GPA: 4.0/4.0

Coursework: Algorithms with Applications, Machine Learning and Data Mining, Compilers, Text Processing

K J Somaiya Institute of Technology, University of Mumbai, Mumbai, India

Aug 2016 – Oct 2020

Bachelor of Engineering in Computer Engineering | GPA: 8.96/10.0 (3.71/4.0)

Coursework: Algorithms, Databases, Web Development, Cloud Computing, Big Data Analytics, Operating System

PROJECTS

- Crontab Manager** – Python, Angular | [read more](#) | [link](#) Jul 2023 – Present
- Creating a UI to allow users to create, update, and delete cron jobs on the host and any Docker containers running on it
- TableGen Formatter** – C++, Compilers | [read more](#) | [link](#) Jan 2023 – Jun 2023
- Extended *Clang-Format* to support formatting of TableGen files with several configurable formatting style options
 - [Accepted](#) for presenting a Technical Talk at the [2023 LLVM Developers' Meeting, Santa Clara](#) (Oct 10-12)
- Tweet Sentiment Analysis** – Deep Learning, Machine Learning, NLP | [read more](#) | [link](#) Mar 2023 – Apr 2023
- Classified tweet sentiments of 1.6 million tweets as *positive* or *negative* by building PyTorch Deep Learning models
 - Compared the model performance with other models such as 1D CNN, and RNN
 - Analyzed and visualized data to perform data cleanup and build preprocessing pipelines
- DNS Server** – C++, Computer Networks | [read more](#) | [link](#) Feb 2023 – Mar 2023
- Implemented a DNS server that recursively resolves a domain name and supports multiple record types
 - Researched the original DNS specification to understand the message formats and learned about *dig* and *nc* commands
- SMPL Compiler** – Python, Compilers | [read more](#) | [link](#) Jan 2023 – Mar 2023
- Constructed a compiler for *SMPL* programming language which includes arrays and user-defined functions
 - Added optimizations such as Copy Propagation, Common Subexpression Elimination, and Dead Code Elimination
 - Implemented a global register allocator by tracking live ranges of individual values and building an interference graph
 - Built a transpiler to convert optimized IR into Dot language and displayed the final output as a graph using GraphViz
- Orca Call Detection** – Machine Learning, Deep Learning Jan 2020 – Apr 2020
- Built a CNN model using Keras to identify Orca whale calls and detect their pods using audio samples and displayed its effectiveness when combining it with template matching, resulting in 92% model accuracy
 - Published and presented a technical paper in SSRN – Elsevier, 2020 (ssrn.com/abstract=3572303)

SKILLS

- Python | C++ | Golang | JavaScript | HTML | CSS | Django | Falcon | Angular | MySQL | MongoDB | Redis | Snowflake
- Cucumber | Pytest | JMeter | Postman | SonarQube | Unit Testing | Load testing | TDD | BDD
- Git | CI/CD | AWS (S3, EC2, DynamoDB, SNS, Lambda, MediaConvert, EventBridge, CloudWatch, APIGateway)
- CMake | Docker | Jenkins | Sentry | Graylog | RabbitMQ | Celery | pandas | NumPy | Codon
- Linux | LLVM | Distributed Systems | Microservices | OOP | REST API | Back-end | Full-stack | Agile