Dhruv Patel

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EDUCATION

University of Southern California   Los Angeles, CA
Master's Degree in Computer Science; GPA: 3.92/4.0   *Expected May 2020*

Relevant Coursework: Analysis of Algorithms, Foundations of Artificial Intelligence, Web Technologies, Information Retreival & Web Search Engines, Augmented, Virtual & Mixed Reality, Software Architectures

Dharmsinh Desai University   Nadiad, India
Bachelor's Degree in Computer Science; GPA: 4.0/4.0   *Aug 2014 - May 2018*

TECHNICAL SKILLS

- **Languages**: Java, Python, Go, JavaScript, C++, PHP, Bash   **Systems**: Linux, Weenix, bpf, netconsd
- **Technologies**: Django, Flask, Spring, Node.js, Express.js, Polymer, Angular, React, Redux, GraphQL, D3.js, Redis, RabbitMQ, Elasticsearch, Grafana, RocksDB, MySQL, Postgres SQL, MongoDB, Firebase, Cocoa Pods
- **Cloud & Infra**: AWS (Lambda, Step Functions, VPC, EC2, Kinesis Data Streams, S3, EMR), GCP (Big Query), Terraform, Jenkins, SaltStack, Vagrant, Docker, Kubernetes, Envoy
- **Software and Tools**: Hadoop, Spark, Kafka, Storm, Zookeeper, Presto, Airflow, Git, JIRA, CoreNLP, Unity

PROFESSIONAL EXPERIENCE

BlueJeans Network   San Jose, CA
Software Engineer Intern   *May 2019 - Aug 2019*

- Developed an end-to-end feature to assign Action Items, Decisions and Reviews to specific members present during a meeting by driving the project from conceptualization to testing and execution. (Java, Spring, MongoDB, JUnit, React). [Released on October 1, 2019]
- Worked closely with the Platform team to build a log aggregation system on AWS using Lambda (written in Python using Boto3), Kinesis Firehose, Elasticsearch, Grafana and S3
- Engineered a solution to reduce the size of ES Cluster by 50% to provide massive economics on ES by requesting logs on-demand
- Assisted in migrating the L7 Proxy Layer of the BlueJeans App from HAProxy to Envoy for incorporating HTTP/2 and gRPC support (over a period of 3 months performed in various maintenance cycles)
- Developed a tool to reduce overhead of deploying Lambda Functions on AWS using Flask, Jinja, Terraform, Docker and Jenkins

Information Sciences Institute   Los Angeles, CA
Graduate Research Programmer   *Oct 2018 - Apr 2019*

- Designed and developed an ETL pipeline to extract data from RDF Triplestore by converting it into JSON and pushing the transformed data into Cassandra.
- Built a Model Catalog Explorer to analyze large datasets used for forecasting environmental challenges using Polymer with Apollo Client (for using GraphQL) and D3.js. Used lazy loading, streams and asynchronous programming to process large data.
- Contributed in the development of SPARQL Query Manager which is used to execute SPARQL Queries on GRLC and published the package on PyPI under the name "oba-sparql"

Indian Institute of Technology, Bombay   Mumbai, India
Software Engineer Intern   *Dec 2017 - Apr 2018*

- Designed and developed APIs in Python using Django REST Framework for Question-Answering System, user-base management (with OAuth 2.0 API Security) and Wordnet Visualizer. Used React with Redux to populate the data in frontend.
- Built a feature based model using CoreNLP to obtain various characteristics of words such as syllable count, etymology, morphemes and n-Gram for detecting the complexity of a vocabulary. Achieved a baseline kappa score of 0.498 on trial and 0.204 on test sets.

PROJECTS

Arancia - Distributed Key-Value Store
Go, Python, Flask, Bash, Celery, RabbitMQ, Vagrant, Saltstack, RocksDB, goproxy

- Implemented a Proxy Server in Go to serve authenticated requests to KV Store from multiple clients via one ingress and egress port
- Developed the REST Client using Flask with Gunicorn Server and containerized the application using Vagrant
- Scaled out Celery with RabbitMQ as the message broker for scheduling regular snapshots of KV Store (replication factor 2)
- Developed a performance benchmark tool and captured P99.9 GET to 14ms and P99.9 SET to 60ms

Twitter Stream Analysis
Java, Twitter4j, Kafka, Storm, Zookeeper

- Using Storm Topology to generate a list of popular words used in twitter. Ingested data from a Storm spout and a Kafka spout and processed downstream using Storm Bolts. Developed a real-time word cloud for analysis

P2P File Transfer
Node.js, Express.js, AngularJS, Peer.js, WebRTC, SendGrid, Heroku

- Designed a real-time browser-to-browser communication system for transferring files from one device to multiple devices without uploading files to a remote server using WebRTC.