Shruti Patel

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RESEARCH

Monarch Butterfly Conservation | *Lead Author*   *June 2020 – Present*
- Collaborating with a team of researchers from Emory, Stanford, and Vanderbilt to train a deep neural network (unet) to predict the number of butterflies in images of monarch butterfly clusters.
- Analyzing the model predictions of the test images.
- Troubleshot and fixed bugs in the model and the training pipeline.

Spark Engineering | *Research Assistant*   *June 2013 – Sept 2013*
- Designed experiments, documented procedures, and tested prototypes for Lowes and Johns Hopkins University.

JefferSat CuteSat | *Power, Thermal, and Environment (PTE) Team Lead*   *Aug 2012 – May 2013*
- Led the team to create and test the power harness for the CubeSat as well as temperature-stress test the chassis and individual components.
- Launched the CubeSat via a weather balloon 64,000ft above sea level, covering 62mi in a little over an hour.
- Project was selected by NASA to be sent aboard their suborbital flight vehicle.

EXPERIENCE

Capital One

Principal Software Engineer   *Nov 2017 – Present*
- Architected and developed parts of a daily-run data pipeline helping save Capital One millions of dollars.
- Saved the company over $1 million per year in AWS costs by rearchitecting the code and infrastructure.

Team Lead   *Feb 2017 – Jan 2020*
- Architected and led the team to gradually move data from a 3rd party legacy application into a microservice; thus, giving power to the users to update and reference the data in question.
- Refactored and optimized microservice so the API response times improved 200%.

Notch *(Acquired by Capital One)*

Data Engineer   *Mar 2017 – Oct 2017*
- Created a Spark job to migrate over $9 trillion worth of Capital One spend and rewards data from their mainframe system to S3, MongoDB, and Cansandra in the cloud.

Data Scientist   *Feb 2017 – Apr 2016*
- Helped develop a k-means model of 13 million row dataset using Spark.
- Created multiple machine learning models using supervised learning on Salesforce data.

Lead Engineer   *Feb 2017 - Jan 2020*
- Collaborated with a team of designers, product managers, and product owners to create a machine learning based health and wellness app that grew the startup client's valuation to $10 million.
- Architected and created platform to hand-groom decision trees that also solved the cold start problem.

Maxx Potential

Lead Engineer   *July 2014 – Aug 2015*
- Led a team of developers to create web/iOS/android apps for a Brazilian peer-to-peer money transfer platform.

Analytics Analyst   *Feb 2017 - Jan 2020*
- Implemented Google Analytics event tracking and A/B testing for Medstar group of hospitals and its affiliates.

AWARDS

Technology Builder
Margret Lyn McDermind Award   *Oct 2015*

EDUCATION

University of Virgina
Bachelor of Science in Aerospace Engineering   *Aug 2009 – May 2013*

TECHNICAL SKILLS

Languages: Java, Python, SQL, Golang, PHP, Rust, Dart, Swift, JavaScript, HTML/CSS, dotnet, R
Frameworks: Spark, Tensorflow, Java Spring, Cucumber, Drools, Hugo, Laravel, Flask, Django, Flutter, React Native
Developer Tools: AWS, Git, Docker, AWS, Jenkins, Linux, Terminal/CLI, Postgres, MongoDB, Cassandra, Kafka
Other: monolith to microservice migrations, data migrations, jira, and agile project management