

Shruti Patel

804-503-3244 | shruti222patel@gmail.com | www.shrutipatel.com

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.
- Troubleshoot 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 2018 – 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 Cassandra in the cloud.

Data Scientist

Feb 2017 – Apr 2017

- 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

Nov 2015 – Feb 2017

- 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

May 2014 – July 2014

- Implemented Google Analytics event tracking and A/B testing for Medstar group of hospitals and its affiliates.

AWARDS

Technology Builder

Margret Lyn McDermond Award

Oct 2015

EDUCATION

University of Virginia

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