Parth S. Patel

Data Scientist
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EDUCATION

DREXEL UNIVERSITY
BS in Biomedical Engineering
Sept 2014 - June 2018
Concentrated in Bioinformatics
College of Biomedical Engineering

LINKS

Website: **parthspatel.me**
Github: **parthspatel**
LinkedIn: **parthspatel96**

PROJECT LINKS
TMRemote: **beta.tmremote.io**

COURSEWORK

UNDERGRADUATE
Data Mining & Machine Learning
Data Structures & Algorithms
Genome Information Engineering
Computational Bioengineering
Database Management Systems
Linear & Dynamic Systems
Statistics
Biosimulation

ONLINE
Stanford: Machine Learning
Stanford: Convolutional Neural Networks for Visual Recognition

SKILLS

PROGRAMMING
Python (scikit-learn, TensorFlow, PyCUDA)
SQL (Transact & Postgres)
R (shiny & ggplot2)
C++ • C • MATLAB • Node.js • Java • Batch
LaTeX • Visual Basic • Android

SOFTWARE
Tableau • Excel(VBA, formulas, pivot tables)
Teradata Studio
Android Studio • Access • SharePoint

HOBBIES

Origami • Digital Painting • Cooking

REFERENCES

Jason Pan | Data Scientist | Pfizer
Ashima Varshney | Associate Director CMC | Pfizer
Bing Yao, Ph.D. | Physicist | Kessler Foundation

EXPERIENCE

Wylei | Data Analyst
August 2018 – Present | Newport, NJ
- Detect & filter duplication patterns for marketing campaigns using ml techniques.
- Automated report generation and designed dashboards, to present campaign performance to clients using python & Node.js, reducing delays.
- Simplified and optimized the report configuration process by developing a tool using Node.js, reducing turnaround time for new report by days.

Pfizer Global Business Intelligence | Data Scientist
Sept 2016 – March 2017 | Manhattan, NY
- Developed a prescription shopping outlier detection system based on unpredictability. Employed Shannon's entropy and clustering for 70M patients on opiates in the OptumRX dataset
- Trained the larger team in anomaly detection algorithms and techniques
- Employed Kaplan-Meier Estimator and Greenwood's Formula to predict probability of persistence on therapy for oncology drugs, presented via a persistency chart
- Automated the weekly vendor data refresh process using shell scripting and Python

Kessler Foundation | Summer Intern
June 2015 – Sept 2015 | West Orange, NJ
- Successfully designed and implemented an EEG-fMRI study on visual networks in the brain of multiple sclerosis patients

Rutgers University WINLAB | Summer Intern
June 2014 – Aug 2014 | New Brunswick, NJ
- Developed an Android music streaming application using the Mobility First API and Android Studio in a team of five

PROJECTS

Deep learning for CRISPR-Cas9 Activity Prediction | May 2018
Developed a convolutional neural network architecture using TensorFlow trained on Cas9 modification frequencies aggregated from literature. Demonstrated that our models perform better at predicting Cas9 activity than the CNN Seq-Deep model (Kim et al. 2018) and that deep learning methods are better than deterministic predictors.

TMRemote - Real Time Data Collection & Manager | March 2018 – Present
Developed a dedicated desktop and web application to remotely monitor and update bot applications, utilizing QT, Python, PostgreSQL, and PHP. Currently under beta testing. **(link)**

CRISPR Excision Therapy Screening | Sept 2017 – May 2018
Designed a time-efficient, high throughput, and accurate screening strategy for a CRISPR-spCas9 excision therapy.
- Designed a custom microarray, describing a patient's HIV genome
- Maintained and utilized the crisprtree Python module to determine Cas9 binding and cleavage potential
- Developed a Python algorithm to derive patient suitability from microarray results and crisprtree

The developed methods and tools allow researchers to redesign the current treatment to target and treat more patients.

Prostate Cancer Predictor | August 2017
Created a prostate cancer predictor in Python, using biomarker concentrations data. Utilized random forests and kNN for classification and 5-fold cross-validation for optimization.