ANIRUDDH KHERA

aniruddh.khera@nyu.edu | LinkedIn: https://www.linkedin.com/in/aniruddhkhera/ | GitHub: KheraAniruddh | Ph: (347)-901-3650

EDUCATION

Master of Computer Science - *New York University – Courant Institute of Mathematical Sciences,* New York　　Jan. 2019
　Coursework: Algorithms, O.S., Object-Oriented, Cloud Computing, Databases, Big Data, Machine Learning　　GPA: 3.69
Bachelor of Engineering - *Manipal Institute of Technology,* India　　May 2014
　Computer Science & Engineering　　GPA: 3.56

TECHNICAL SKILLS

Programming Languages	:	Java, C, C++, Scala, Python, C#
Web Technologies	:	REST web-services, JavaScript, Angular JS, React JS, Node JS, XML, HTML, CSS, Bootstrap
Frameworks & Tools	:	Hadoop, Spark, Spring Boot, Play Framework, Maven, SBT, NPM, JIRA
Cloud	:	AWS, Heroku, Docker, Kubernetes
Databases	:	PostgreSQL, MySQL, SQL Server, MongoDB
Operating Systems	:	Linux, Windows
Version Control	:	Perforce, Git
Machine Learning Libraries	:	Python (Pandas, NumPy, Scikit-learn, PyMC3, PyTorch, Keras, TensorFlow, Statsmodels), R

WORK EXPERIENCE

GE Healthcare, Bangalore, India

　Senior Data Engineer *(Promotion) - Global Services - Data Analytics*　　Oct. 2016 – Dec. 2016
- Developed modules to ingest batched log files (in different formats) of various medical devices using Hadoop (Sqoop, Hive)
- Parsed the data using UDFs in Java and persisted structured data in Greenplum database for running Prescriptive Analytics

　Software Engineer / Edison Engineer - *Edison Engineering Development Program*　　July 2014 – Oct. 2016
　1. <u>Remote Healthcare- Maternal, Infant care</u>: *An open source project with government*
- Built RESTful APIs using Spring Boot and UI using React JS & Redux framework; Followed Agile with bi-weekly sprints
- Designed a rule-engine based on protocols configured in JSON and built a subscriptions handling framework using ActiveMQ
- Developed offline app. capability using Service Workers and built SMS service module by assessing 3rd party SMS gateways
- Wrote Junit and integration test cases using Mockito framework
- Refactored code to fix critical issues using SonarQube and used Jenkins for CI & CD of application on AWS EC2 instance

　2. <u>Virtual Tumor Board</u>
- Conducted market research to understand oncology workflow and scope requirements from top 10 healthcare providers
- Independently developed and deployed a standalone web app. using Angular JS 1.x, Play-Framework (Java), Hibernate / JPA
  - Built webRTC (VoIP) features to virtually-connect doctors; Developed a dynamic form builder saving $3000 p.a. per setup
  - Proposed a technical design and optimized interoperability across information systems using HL7 standardization
- **Achieved 2 grants of $300,000 & $500,000 from ASEAN CEO** to scale product and team
- **Managed a team of 6 engineers** functioning as **Lead Software Engineer**; Applauded with **2 awards** for the impact on project

　Internship - *Magnetic Resonance Imaging (MRI)*　　Jan. 2014 – July 2014
- Built and integrated plugin using Java Swing and JNI to set annotation preferences on GRx viewports during run time
- Developed an algorithm to work with multiple cross-sections that ascertains relative orientation by applying 3D transformations

ACADEMIC PROJECTS

　<u>Study of Bayesian Neural Network</u> - **Published research paper:** https://arxiv.org/abs/1801.07710
- Surveyed sampling (MCMC, NUTS) & inference (Variational Inference) techniques to compute the posterior distribution over the parameters of model, using Probabilistic Programming model baked in a two-layered feed-forward neural net
- Predicted Powerball number, results comparable to AdaBoost and Gaussian classifiers along with the uncertainty in the model
- Forecasted S&P 500 stock price more accurately than ARIMA model in addition to the estimation of uncertainty in predictions

　<u>Technical & Fundamental Analysis of S&P 500 Companies using Spark</u>
- Built ETL layer for ingesting data from Yahoo! Finance, NASDAQ, EDGAR SEC using Spark SQL
- Trained ARIMA (time-series) model to forecast stock price on rolling basis; Used spark-TS to minimize shuffle across network
- Discovered increasing trend in IT sector across 10 years based on Top-20 performing companies, evaluated using ROI, Cash Ratio

　<u>Predict ETF stock market movement using News Articles and Twitter</u>
- Developed MapReduce functions with Hive to batch process the real-time data from twitter, News forums and Yahoo! finance
- Trained Logistic Regression and Random Forest models maintaining temporality of data with predictive accuracy of 78.33%
- Used NLP: Sentiment & emoji analysis (self-built) on tweets and extracted ontologies from news articles using Topic Modeling
- Presented the project as a **co-guest speaker** in **NYAI meet up** with an audience of ~60 people

ACHIEVEMENTS & EXTRA-CURRICULAR

- Achieved 2 silvers and 1 bronze medal in **National swimming meet, India**; Won 100+ medals in state & college events
- Appointed as a **Teaching Assistant** for graduate courses on **Predictive Analytics** and **Big Data**