Abdul Hannan Kanji

+1-650-314-8021
akanji@cs.umass.edu
/hannanabdul55
/hannanabdul55
abdulhannan.in

Education

University of Massachusetts, Amherst September 2019 – June 2021
Master of Science, Computer Science *Amherst, MA*

- **Courses:** Machine Learning , Neural Networks, Systems for Data Science, Advanced NLP, Probabilistic Graphical Modeling, Reinforcement Learning, Algorithmic Fairness.

PES Institute of Technology September 2011 – May 2015
Bachelor of Engineering, Computer Science *Bengaluru, India*

- **Courses:** Data Mining, Natural Language Processing, Cloud Computing and Big Data.

Technical Skills

- **Programming languages:** Python, C++, Java, Kotlin, JavaScript.
- **Tools:** PyTorch, Tensorflow/Keras, scikit-learn, Python Pandas, Android, Spark, Hadoop.

Experience

Reich Lab, UMass Amherst June 2020 – Present
Research Programmer *Amherst, MA*

- Managed **visualization, data validation and the build pipeline** for COVID-19 forecast hub, the data source for the official CDC COVID-19 Forecasting page.
- Built automated workflows for most weekly operations for the hub like truth data collection, upload new forecasts to the database, and build of the visualization.

Intuit Inc. August 2015 – July 2019
Software Development Engineer II *Mountain View, CA/Bengaluru, India*

- Developed a proprietary **"build once, deploy on all devices"** framework which is used by all product offerings across Intuit on mobile,web and desktop platforms.
- Developed import of customer receipts data into **Quickbooks** and implemented **receipt validation and extraction** for Quickbooks using OCR on Tensorflow Lite. Saved Intuit +$3500/month.

Projects

Seldonian Safety project September 2020 – Present

- Working with Prof. Philip Thomas on building a library that trains models with safety/fairness constraints using the proposed Seldonian Approach is his Science paper.
- Implemented extensions to the algorithm for better splitting of the data using stratification. With this method, the probability of getting a solution increased by arounf 60% on a Binary Classification problem.
- Library publicly published on Github and documentation present at seldonian-fairml.readthedocs.io.

Microsoft Fairlearn January 2020 – Present

- Worked with Microsoft on the fairlearn repository where I implemented fairness constraints like Equality of Opportunity and made improvements to their ExponentiatedGradient algorithm which is already showing improvements in training time.
- Run experiments with enhancements on scalability of ExponentiatedGradient along with development of a notebook to benchmark fairlearn against Tensorflow Constrained Optimization.

OpenStack Extension to Hybrid Cloud February 2013 - February 2014

- Developed a **Hybrid Cloud framework** that extends the features of **OpenStack** to enable **cross-cloud federation**. Project selected to be presented at the **OpenStack Summit 2014** in Atlanta, GA.

Publications

Sitaram, D.; Phalachandra, H.L.; Harwalkar, S.; Murugesan, S.; Sudheendra, P.; Ananth, R.; Vidhisha, B.; **Kanji, A.H.** ; Bhat, S.C.; Kruti, B., **"Simple Cloud Federation"** in Modelling Symposium (AMS), 2014 8th Asia , 23-25 Sept. 2014.

Volunteer Experience

Make A Difference (MAD) July 2016 - March 2017

- MAD teaches disadvantaged kids in various shelter homes across India. Taught **Mathematics** to a **7th grade class** for 1 academic year.