Github: https://github.com/safakhan413 Toronto, Ontario

SAFA NASIR
Toronto, Ontario
safakhan413@gmail.com
+1(437)7887375 (Canada)
https://www.linkedin.com/in/safanasir/

SUMMARY

Machine Learning Engineer and Data Scientist with a language and tech agnostic mindset, and always looking to learn new skills to deliver creative engineering solutions for problems. Aspire to work in a stimulating and progressive environment with challenges that demand creativity and constant learning

EDUCATION

- **Shanghai Jiao Tong University**, China (*GRE:163Q,160V)* PhD Candidate(Deep Learning, Vision), *06/2017 - Present, (GPA: 3.72)*
- **Lahore University of Management Sciences**, Pakistan Master of Science(Networks), *06/2012 - 06/2016, (GPA3.33)*
- **GBI 2014, Kelly School of Business, Indiana**, United States Summer Program(Entrepreneurship), *05/2014 - 07/2014*.

SKILLS

- **Machine Learning:** Python, Matlab, Tensorflow, Google Colab, Keras, Pytorch, Transformers, GANs, LSTMS, RNNs, Deepfakes, YOLO, Numpy, Traditional methods
- **Web Development**: Nodejs, angularjs, ruby, ruby on rails, mochajs, chaijs, casperjs, php, html, css, selenium, javascript, JSON, MySQL, Istanbul, REST
- **Programming Languages**: Java, C++, Shell scripting, Javascript, NodeJS, jquery, MATLAB, assembly, tcl, awk, scripts, d3js, SQL
- **Miscellaneous:** Github, Docker, metaspolit vulnerability detection, Github Desktop, linux
- **Data Science:** Pandas, Scikit, matplotlib, seaborn, pickle, spyder, jupyter

WORK EXPERIENCE

Shanghai Jiao Tong University *CSC Research Fellow* *06/2017 - Present,*

- Researched Deepfakes and Unsupervised Video Retargeting,
- Investigated enhancements in Deepfakes to render photo-realistic videos without ghosting effects,
- Deployed several concurrent approaches to both deepfakes forensics and enhancement techniques,
- Identified RNN/LSTM based solutions to expedite unsupervised learning from sparse real world problems
- Capable of building Machine Learning models to deliver insightful analytics
- Capable of researching and developing new algorithms or refining existing algorithms in academia
- Feature engineering, regularization, hyperparameter tuning, ensemble methods, neural network architectures

Careaxiom(https://careaxiom.com/) *Web Developer* *12/2015-04/2017,*

Careaxiom offers cloud-based care coordination solutions. Based in the US. The startup focuses on clinical collaboration between all the stakeholders in senior living communities e.g. seniors, family, doctors, nurses, pharmaceutical companies.

- Web Development Engineer and the Lead of SQA team
  - Spearheaded a team of SQA
  - Built backend in nodejs
  - Created front end using Html, css, angularjs and php
  - Engineered black box testing with webscripting using selenium and casperjs
  - Assisted architecture design, development and unit testing of products
  - Developed White-box testing with mocha.js, chai.js and sequelize migrations
  - Deployed Metasploit to identify security vulnerabilities
  - Automated Code coverage measurement using Istanbul.
  - Set up Database Migrations in the Caremerge NodeJS codebase
- **Saved cost** by deploying opensource metasploit system to identify security vulnerabilities of the SAAS product instead of leveraging paid Veracode service
- Deep knowledge of software engineering best practices; including, Agile, coding standards, code reviews, source management, build processes, testing and operation

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7Vals(http://www.7vals.com/) *Web Developer* *04/2014-10/2015*,

7vals is a Silicon Valley based firm with two major products: EZ-Office-Inventory, EZ-Rent-Out.

- Assisted Features development and unit testing of features and modules
- Developed architectural modules with Ruby on Rails framework
- Utilized html, ruby, css, MySQL, json, angularjs for full stack development
- Facilitated maintenance of full stack solutions
- Assisted Product designing and communication with customers in the U.S.
- Managed newsletters and infographs about new features

PROJECTS

- **Led research on Deepfakes enhancements** at Shanghai Jiao Tong University's Brain-like Computing and Machine Intelligence
- **Investigated relationship between CoDel and congestion delay in Data Center Networks**. Simulated Fat tree topology in NS2 framework and compared CoDel with RED, FRED, BLUE, Droptail queuing tecniques
- **Designed and built Fuck Every Scheduler integrating top features of both Brain Fuck Scheduler of Con Kolivas and Completely Fair Scheduler of Ingo Molnar to decrease latency for all jobs**. Investigated and verified that co-operation of schemes between prevalent scheduling methods in the context of multi-core OS design delivers superior performance.

HONORS

- **Prestigious PEEF scholarship** for top 30 candidates gaining admission in top 50 QS ranked schools in the world
- **NOP Scholar** for Bsc Hons. at Lahore University of Management Sciences
- **Prestigious CSC Scholarship** (China Scholarship Council)
- **US Dept. of State, Coke, Indiana scholarship** for GBI 2014

CERTIFICATIONS

- **Tensrflow for AI, Machine Learning and Deep Learning(**DeepLearning.AI**)**
- **Global Business Institute 2014 Kelley School (**Indiana University**)**
- **Convolution Neural Networks (**DeepLearning.AI on coursera**)**
- **Machine Learning (**Stanford University on coursera**)**
- **Divide and Conquer Algorithms(**Stanford University on coursera**)**