Safa Nasir

Toronto, Ontario | 437-788-7375 | safakhan413@gmail.com | https://www.linkedin.com/in/safanasir/
Portfolio (https://safakhan413.github.io/) | Github (https://github.com/safakhan413)

Machine Learning Engineer | Data Scientist | Python Developer

Deep Learning Engineer with diverse industry and academic experience in Deep Learning. Delivered machine learning models and streamlined scalable data ETL pipelines. Supervised a team of Quality Assurance engineers to deliver high quality software products on-time and on-budget. Skilled at machine learning, data science and python development. Ambitious lifelong learner with a language and tech agnostic mindset, and always looking to learn new skills to deliver creative engineering solutions for problems.

CORE SKILLS

- **Machine Learning:** Scikit-learn, Tensorflow, Pytorch, Transformers, GANs, LSTMS, RNNs, Deepfakes, YOLO
- **Web Development**: Nodejs, angularjs, Ruby on rails, mochajs/chaijs, php, html, css, selenium, Istanbul
- **Database**: JSON, MySQL, SQL, POSTGRESQL
- **Programming**: Python, MATLAB, Java, C++, Shell scripting, Javascript, jquery, , assembly, tcl, awk,
- **Tools:** Github, Docker, LINUX

CAREER HIGHLIGHTS

- **Pioneered research on Deepfakes enhancements** at Shanghai Jiao Tong University's Brain-like Computing and Machine Intelligence Lab
- **Saved 100% security cost** by deploying open source Metasploit system to identify security vulnerabilities of the SAAS product
- **Investigated relationship between CoDel and congestion delay in Data Center Networks**. Simulated Fat tree topology in NS2 framework where CoDel **outperforme**d RED, FRED, BLUE, Droptail techniques
- **Designed and delivered a Linux system-level process scheduler** that outperformed both Brain F. Scheduler and Completely Fair Scheduler **for all jobs in the context of multi-core OS** design.

PROFESSIONAL EXPERIENCE

Research Scientist | Shanghai Jiao Tong University, China   *06/2017 - Present*
- **Pioneered time-series based enhancements in ReCycleGAN Deepfake architecture (Unsupervised Video Retargeting**) to render photo-realistic videos without ghosting effects
- **Feature engineering, regularization, hyperparameter tuning, ensemble methods, ANNs,**
- Deployed several concurrent approaches to both deepfakes forensics and enhancement techniques,
- Expedited unsupervised learning from sparse real world problems usingRNN/LSTM based solutions to.

Business Development Associate| ADDO AI, Pakistan   *04/2017 - 06/2017*
- Led AI market solution research and market players for startups and government agencies in Singapore and Pakistan

Web Developer | Careaxiom, Pakistan   *12/2015 -04/2017*
Careaxiom, a US based SaaS company that offers cloud-based care coordination solutions involving senior living communities(seniors, family, doctors, nurses, pharmaceutical companies). **Hired as QA, promoted to lead QA and then promoted to Web Developer.**
- Lead a team of 5 QAE and engineered black box testing with webscraping using selenium and casperjs
- Built backend in nodejs and front end using Html, css, angularjs and php
- Assisted architecture design, development and unit testing of products

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- Developed White-box testing with mocha.js, chai.js and sequelize migrations
- Set up Database Migrations in the Caremerge NodeJS codebase and automated Code coverage measurement using Istanbul.**Saved cost** by deploying open source metasploit system to identify security vulnerabilities of the SAAS product instead of leveraging paid Veracode service

Web Developer | 7Vals | Pakistan   *04/2014 -10/2015*

7vals is a US based firm with two SAAS products for rental and inventory management used by Amazon, CNN, Intel

- Developed architectural modules with Ruby on Rails framework
- Maintained full stack solutions utilizing html, ruby, css, MySQL, json, angularjs for full stack development
- Assisted Product designing and communication with customers in the U.S.
- Designed newsletters and infographs about new features

Visiting Faculty | IUB (Public University)| Pakistan   *08/2011 -12/2011*

- Taught courses: Data Structures and Algorithms, Object Oriented Programming in Java

EDUCATION

- **Shanghai Jiao Tong University**, China (*GRE >85%*), PhD Candidate *(GPA 3.72)*   *06/2017 - 08/2021*
- **Lahore University of Management Sciences**, Pakistan, Master of Science *(GPA 3.33)* *06/2012 - 06/2016*
- **Kelley School of Business, Indiana**, United States**, Global Business Institute**   *05/2014 - 07/2014*

HONORS

- **Prestigious PEEF scholarship**: 30 out of 1000 admitted by top 50 QS ranked global schools. 2017
- **Prestigious CSC Scholarship** (China Scholarship Council) 2017
- **US Dept. of State, Coke, Indiana scholarship** for GBI 2014

CERTIFICATIONS

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