Hi

I'm Sumanth and I am obsessed with how systems function and change over time.
I have two degrees in Engineering and my senior year thesis was an investigation into increasing the penetration of wind energy and other renewable sources into the main grid using tools of Machine Learning (Regression and Time Series) and Deep learning.
I finished graduate school at the University of Toronto where I studied Control system design in the department of Electrical and Computer Engineering. Most of my coursework was in Applied Math while main projects were based in Optimization, Signal Processing and Robotics.
Professionally, I've worked in Risk Consulting (at KPMG) where I lead a small team during the second part of the IT audit of an insurance company for IBM. I also developed strategies for smaller tech companies in best software practices on behalf of clients such as Oracle and Microsoft.
I've also worked at an e-commerce company dealing in wine and spirits where I was responsible for building a pipeline to transform raw data from customer invoices and other sources into a dataset that was to be used in building a product recommendation engine.
The thread which connects both my academic and industrial experiences is my love for data and my investigations into the amount of sense that can be made using quantitative methods. You can check out my GitHub (http://www.github.com/sumanth0892) to see how I code (I love Python, C++, R and proficient in SQL). I love working on datasets from a diverse set of sources, ranging from Movies to Income demographics to even High Energy Particle Physics. I am highly familiar with a wide range of techniques, such as **Regression, Time Series and Artificial Neural Networks, as well as fine-tuning a model for specific results.**
One of my most memorable experiences was working with EWB Canada to propose a FinTech company to alleviate the problem of malnutrition in Haiti. I was responsible for the core business model and convinced my team to adopt a more holistic approach than focusing exclusively on the diet.
I hope to be a Venture Capital investor in the near future, raising funds for promising ventures in Consumer media, Energy, Transportation and Healthcare/Genomics, among other things. This requires me to be both curious and quickly run simulation models on new ideas using software and existing research. I've developed these skills through my professional and academic research endeavours, and most recently, I've been working as a freelance researcher due to the fact that the current crisis has slowed down recruitment.
One of my other interests is financial history and how a lot of it can be quantified using Time Series.. We expect the markets to be more smooth and have less volatility (as we get more information) and stocks to run steadily in a north-eastern way, but what we've seen are more manias, busts and bubbles from the late 1980s, starting with the Japanese real-estate bubble to the Housing crisis in late 2007.
Hit me up @sumanthpv.venkateshmurthy@alum.utoronto.ca to talk about this application or any of my other interests, such as financial history (Niall Ferguson and Daron Acemoglu are some of my favourite authors!), science-fiction (I love Neal Stephenson and Daniel Suarez) and rock-climbing!

Best
Sumanth

Sumanth Pareekshit Venkatesh Murthy

Budding Technologist and Sensemaker-in-training

+1(437) 220-6531
sumanthpv.venkateshmurthy@alum.utoronto.ca

RELEVANT EXPERIENCE

Liquid Analytics, Toronto - ***Data Engineer***
June 2019 - September 2019
First member on the Data Engineering team at Liquid Analytics, an e-commerce retailer.
Worked closely with DevOps and Product manager to own a pipeline using data from customer invoices, order forms and product reviews and transform them into a dataset for a Product recommendation engine and store them into **BigQuery**.
Ran simulations with Decision Trees and Collaborative filtering to test relevance of features.

University of Toronto, Canada - Research Assistant/Entrepreneur
January 2016 - June 2019
Research Project 1: Researched the flow of signals and impulses in a squid axon, i.e. an action-potential. I worked on modelling the signal using mathematical methods such as Fitzhugh-nagumo circuits. The second part of the project involved reconstructing this signal using Deep learning techniques.
Research Project 2: Built an image Preprocessing system using **Computer Vision techniques** to detect coral reef damage before they go into a Neural net.
Research Project 3: Path planning for a drone and a robot used in a Manufacturing environment using non-linear control dynamics and agent-based modeling.
Research Project 4: Applied Sentiment analysis to various sources of news such as Newspaper articles, Podcast audio, Video clips, Tweets and Blog posts using GloVE embedding to assign a probability for the degree of accuracy and detect any bias, both based on the content of the article/item in question. Tried to monetize this into a tech venture by combining with Blockchain.

Triumph Gear Systems, North York — ***Project Associate***
January 2016 - June 2016
Worked as a Project Associate at Triumph Gear Systems, an Engineering and Manufacturing company to redesign production and shipping routes and increase savings in two parts for GE and Honeywell. Redrew routing diagrams and built an analytics tool to predict machine failure using sensor data.
Predicted savings of nearly $30000 per part with the new simulation and recommendations reviewed very favourably by the plant manager.

KPMG, India - ***Risk Consultant***
2014 - 2015
Worked as a Risk consultant in the Contract-Compliance department of KPMG.
Led the second-part of the Metlife IT Audit independently and managed a team of about 15.
Analyzed Datasets in **SQL and Excel** to recommend strategies to clients such as IBM and Oracle.
Led the IT audits of 30 small firms across South India as the sole consultant for Microsoft.
Received **high recommendation** from my mentor during my first year.

VT University, India - ***Research Assistant***
2013 - 2014
Built Statistical learning techniques (Regression, Time Series Modelling and LSTM Neural Nets) to analyze data obtained from a wind energy generation facility to predict power output a day ahead and hence aid in load-demand studies and increase the penetration of such resources into the main grid.
Main challenges came in the form of **absence of frameworks such as Tensorflow and PyTorch.**

EDUCATION

University of Toronto, Canada — *Master's Degree in Electrical and Computer Engineering*
September 2015 - 2018
Relevant Coursework - *Supervisory Control of Discrete Event Systems, Hybrid Systems and Control Applications, Digital Image Processing, Video Encoding - Special topics in hardware.*
Additional Coursework:
Robotics Specialization - Coursera/University of Pennsylvania
Blockchain Specialization - Coursera/SUNY Buffalo
Financial Modeling and AI in Finance - Coursera/NYU Tandon.

SKILLS

Scripting Languages:
Python, C++,R and MATLAB

Libraries and packages
Numpy, Scipy,Scikit-learn ,Keras, Tensorflow, Simulink and openCV .

Other: **HTML+CSS, Apache Beam SDK, ROS Platform for Robotics, and SQL, Google Cloud**

AWARDS

Winner of EWB Canada business case study contest - Proposed a finTech startup to alleviate poverty in Haiti.

Global Fellow - StartingBloc institute in 2016. DC Chapter

Indo-Canadian delegate : World Business Dialogue 2016

ELITE and Robotics Certification.

LINKS:

Most of my projects and code is available on my Github:
http://www.github.com/sumanth0892

LinkedIn:
http://www.linkedin.com/in/sumanth0892