


VAIBHAV KUMAR

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EMPLOYMENT

Shopify, Ottawa, Canada


12/2018 - Present




Senior Data Scientist, Shopify Capital 

- **Develop data models, tools**, collaborate with stakeholders and present reports to support improvements and growth of product.
- Mentor team members and guide decision-making and data model design skills.
- Led project to increase total monthly lending amount by >\$1M and median offer amount by 40%.

Tesla, Palo Alto, USA & Vancouver, Canada

12/2013 - 10/2018

Senior Data Engineer, Systems Integration 

- Drive future firmware design and improvements by identifying vehicle performance trends and flagging potential issues in engineering and customer fleets. Close collaboration with firmware developers, managers, manufacturing, service and data teams.
-  • Build **PySpark**, Impala and **Python-based analysis tools** to facilitate wide data accessibility and quicker decision-making turnaround.
-  • Successfully grew a data-driven culture within firmware organization where data is now used as first-class citizen in validating systems-level performance and effecting change. **Significantly improved signal-to-noise ratio in metrics reporting.**
-  • Improve data management, quality and workflow from logging to end-user consumption with growing needs and complexities.

Prophecy Sciences, San Francisco, USA

07/2013 - 09/2013

Intern, Computer Vision Software and Hardware

- Lead Python Developer at early-stage start up for new pupil-tracking software using OpenCV.
- Designed new headset-mounted vision system prototypes. Tested and selected infrared LEDs and camera. Liaised with suppliers.

EDUCATION

Stanford University

2013



Degree of Engineering in Aeronautical and Astronautical Engineering 

Professional degree of 45 units graduate coursework beyond Masters, with a research thesis

Stanford University

2012


Master of Science in Aeronautical and Astronautical Engineering

- **Coursework:** **Programming Methodology, Multidisciplinary Design Optimization, Interactive Management Science**, Robotics, Computational Fluid Dynamics, Fourier Transforms, Control Systems, **Scientific Computing**, Spacecraft Design. 
- **Key projects:** Robot dynamics and **object detection**, Nanosatellite design, Research thesis on lightning effects on the ionosphere. 

Monash University

2009

Bachelor of Aerospace Engineering (First Class Honours) & Bachelor of Commerce (Management)

- **Research:** Published three journal papers, two conference papers and presented at international conference on Particle Image Velocimetry. **Received award from Visualization Society of Japan for Excellent Visualization**, 2008 – 2010 
- Business and Economics Faculty, Scholarship for Excellence and Equity, 2005 – 2009
- Faculty of Engineering Dean's Honours Scholar, 2009

Lulea University of Technology

2008

Exchange Program at the Department of Space Science (Kiruna)

- **Projects:** Nanosatellite and ground station communication interface design using LabVIEW, Stratospheric weather balloon.

TECHNICAL SKILLS

- Python, Spark, Presto, Impala, Airflow, MySQL, Tableau, Mode, MATLAB, Linux, Splunk (basic).
- Udacity Nanodegrees: Artificial Intelligence (2018), Deep Learning Foundations (2017).

TEACHING



- Teaching Assistant at Monash University and Stanford University: Computing for Engineers, Introduction to Scientific Computing, Engineering Dynamics, Flight Vehicle Dynamics, Economic Growth and Development.
- Young Astronauts, Stanford University (2010 – 2013): Educated elementary school students on space science and engineering.

OTHER ACHIEVEMENTS AND ACTIVITIES

- Core committee, Code for India, a platform to help solve technical challenges for non-profits in India, 2013 – present.
- Authored Aeronautics and Astronautics career guide, Career Development Center, Stanford University, 2013.
- Student Co-Chair for the International Conference on the Exploration of Phobos and Deimos, NASA Ames, Mar. 14-16, 2011.
- Young Achievement Australia – Program for young entrepreneurs across state to establish and run a team business.
 - Business Person of the Year finalist, 2006
 - Mentor: Guided student-run business to succeed in achieving its goals, 2007
- Golden Key International Honour Society, Monash Univ. – Vice-President (2008 – 2009), Executive Committee (2006 – 2011).