Vishal Gupta

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EDUCATION

University of Florida   **Gainesville, FL**
MS in Computer Science GPA: 3.59/4.0   *Aug 2016 - Dec 2017*
Courses: Advance ML, Advance DS, Big Data Ecosystems, Distributed OS, Analysis of Algorithms, Sparse Coding

Indian Institute of Technology   **Kanpur, India**
B. Tech. in Electrical Engineering GPA: 7.0/10.0   *June 2010 - June 2014*
Courses: AI Programming, Probability and Statistics , Statistical Simulation & Data Analysis, Convex Optimization, NLP

EXPERIENCE

Claimfound Inc.   **Gainesville, FL**
*Software Developer | Skills: **Python, Flask, PostgreSQL, Docker***   *March 2018 - Present*
- Development & automation of back-end infra, **optimizing search** and claim matching using white pages user data

Qualcomm Inc.   **San Diego, CA**
*Graduate Engineering Intern | Skills: **TensorFlow, GPU, AWS***   *May 2017 - Aug 2017*
- Research of CNN based **deep learning algorithms*** for improving traditional camera design and capabilities
- Development of Python APIs for generating high quality RGB images from raw sensor data
- Reduced (luma & chroma) noise by 50% using multi-resolution approach for large range of ISOs
- Assisted in lecture on deep learning to 100+ software and systems engineers across the company

Qualcomm India Pvt. Ltd.   **Bangalore, India**
*Associate Engineer | Skills: **C++, Python, Perforce***   *June 2014 – Aug 2016*
- Assisted in **development & integration of firmware** on premium tier SoCs: Snapdragon 820, 810, 800 etc
- Reduced man-hours by 3x & 2x boost in verification coverage by **automation of back-end** verification infra on 7 SoCs

Intelligent Data Engineering & Automation Laboratory   **Kanpur, India**
*Research Associate | Skills: **MATLAB, Java, Android***   *May 2012 - Dec 2012*
- Formulated methodology for faulty behavior discovery using **advanced signal processing** techniques on acoustic signals
- Achieved 98% accuracy for fault detection using **Softmax Classifier with Sparse Auto-Encoder** & just 25 samples per fault

PROJECTS

Multi-Domain Chat-bot | *Skills: **TensorFlow, GPU, GitHub***
- **RNN-LSTM network with attention mechanism** for embedding multi-domain context
- Improved the context specificity of output ranging from information-centric questions to understanding emotions.

Credit Card Fraud Detection | *Skills: **Pandas, Sklearn, GitHub***
- Achieved **highest AUC of 0.98** on extremely skewed fraud transaction dataset with XGBoost algorithm & ensemble methods

Mid-Layer CNN Features for Visual Recognition | *Skills: **MATLAB, C++, SVM***
- Obtained 3% improvement in **object and scene classification** using feature-based clustering and boosted it further by 5% using spatial clustering

Transfer Learning on Kaggle Cats & Dogs Dataset | *Skills: **MATLAB, GPU, Sklearn***
- Obtained 2-class accuracy as high as 70% & 63% for 3-class classification with just 5000 samples using **kernel SVM** with **hyper-parameter optimization** using Bayesian approach using VGG-CNN deep features

PUBLICATIONS

- Nishchal Verma, **Vishal Gupta**, Mayank Sharma & Rahul K Sevakula, *"Intelligent Condition Based Monitoring of Rotating Machines using Sparse Auto-Encoders"*, IEEE International Conference on Prognostic Health Management, 2013
- Anup Zade & **Vishal Gupta**, *"Software Centric Verification of xPU and other Security Blocks**"* In QBUZZ'15, Annual Developer Conference organized by Qualcomm India Pvt. Ltd.

ADDITIONAL

- Technical Skills
  - **Proficient**: Python, C/C++, Java, Git, MATLAB, Linux, Bash, MacOS
  - **Skilled**: Flask, ORM, GPU, HTML, PostgreSQL
  - **Familiar**: Android, Spark, MapReduce, Docker, Angular, JavaScript, TypeScript
- **Gartner Group Info Tech Scholarship** for having outstanding academics and research contribution among 700 master's students in Dept. of CISE for the academic year 2016-2017.
- **Graduate Assistant** for the course Sparse Coding in Sensing, Imaging & Learning, Fall'17

*1 Patent Application in process; **Manuscript proprietary of Qualcomm