RITWIK GUPTA

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Skills

LANGUAGES

Python
Java
Scala
MATLAB
C
R
Swift

TECHNOLOGIES

TensorFlow
Keras
PyTorch
Apache Spark
Hadoop
Hive
Cassandra
Mesos
YARN
OpenMP
CUDA
Android
ROS/ROS 2.0

COURSEWORK

Advanced Multi-Modal Machine Learning
Computer Vision
Parallel Computing
Cloud Computing
Operating Systems
Compilers
Data Structures/Algorithms
Computer Organization
Systems Programming
Discrete Mathematics
Linear Algebra
Calculus 1/2
Non-Parametric Statistics
Biology 1
Chemistry 1/2

STATISTICAL MACHINE LEARNING

Neural Networks
SVM
Linear/Logistic Regression
Hierarchical Clustering
Dimensionality Reduction
Kernel Methods

Education

University of Pittsburgh
BS Computer Science 2017
Related Areas: Math, Statistics, History

Employment

Carnegie Mellon University SEI Emerging Technology Center
Machine Learning Researcher — Pittsburgh, PA — Jun 2017 to Current

Researching and developing a portfolio of work in the areas of applied robotics, machine emotional intelligence, human machine interaction, computer vision, and adversarial machine learning. Working with TensorFlow, Keras, PyTorch, ROS/ROS 2.0, and more.

UPMC Enterprises
Software Engineer — Pittsburgh, PA — Nov 2016 to Apr 2017

Working on data coherency platforms and the IBM Watson AI XPrize. Worked on an R&D data visualization platform meant to provide high-fidelity, realtime ADT feed metrics across all hospitals in the UPMC Health System.

Apple
Data Science Intern — Cupertino, CA — May 2016 to Aug 2016

Applied Machine Learning team. Implementing clustering algorithms on a large dataset that requires deep feature selection and natural language processing.

Staples SparX/Staples Innovation Labs
Data Science Intern — San Mateo, CA — May 2015 to Aug 2015

Built recommender systems for Staples, the world's 2nd largest e-commerce retailer. Created models were put into production on Staples.com and emails, outperforming existent models. Utilized novel ML modeling using NLP techniques.
Worked with Apache Spark, Hadoop, Mesos, YARN, and Python.

University of Pittsburgh (Chemistry)
Full-Stack/Mobile Developer — Pittsburgh, PA — Jan 2015 to Sep 2016

Developing the Pitt Quantum Repository, a web platform for molecular visualizations and data. PQR is currently in in use by Pitt's general chemistry and biology classes. Working with Flask, Bootstrap, LESS, JavaScript, HTML, and Grunt.

Rectangle
Android Developer — Pittsburgh, PA — Jun 2014 to Current

Created PAT Track, an Android application to track the public buses of Pittsburgh in real-time. The app has over 35,000 users and is the one of the most popular bus tracking app in the region.

University of Pittsburgh (Biomedical Informatics)
Data Science Intern — Pittsburgh, PA — Jun 2014 to Sep 2014

Creating machine learning algorithms to categorize driver and passenger mutations given whole-genome data across various types of cancer.
Worked with Python, Theano, nVidia CUDA, and Scikit.

University of Pittsburgh (Biomedical Informatics)
Research Intern — Pittsburgh, PA — Jun 2013 to Sep 2013

Analyzing the frequency and distribution of palindromes in the entire human genome, with focus on acute myeloid leukemia. Developed tools in Java, Python, HTML, JavaScript, and D3.

Awards

Pitt SmashMash Entrepreneurial Challenge · Winner — Nov 2014
Developed a business plan and application for a medical student-to-university healthcare startup.

NASA International SpaceApps Pittsburgh · Winner + Best Use of Data — Apr 2015
Created a tool that allowed scientists to better tag their data using Twitter.

Red Bull Hack The Hits · Winner — Apr 2016
Created a all-in-one string instrument using an Arduino and cardboard. Featured in Forbes magazine.

Publications

Distribution of Palindromes in the Human Genome. Ganapathiraju, Gupta, Cheng, and Hammond. Journal of Pathology Informatics. March 28, 2014. J Pathol Inform 2014, 1:12.