Varun Rawal

http://rawalvarun.github.io/

Email : vrawal@andrew.cmu.edu
Mobile : +1-412-626-9056

Education

- **Carnegie Mellon University** — Pittsburgh, PA
  Master of Science in Machine Learning, School of Computer Science — *Aug. 2019 – Dec. 2020*
- **Indian Institute of Technology, Kharagpur** — West Bengal, India
  Bachelor of Engineering in Computer Science and Engineering; GPA: 4.0 (9.72/10.0) — *Aug. 2013 – July. 2017*

Professional Experience

- **Qeexo** — Pittsburgh, USA
  ML Research Intern (Master's Summer Training) — *June, 2020 - Aug, 2020*
  - **AutoML - App for ML on Sensor-Data**: Worked on off-device and on-device Real-Time Clustering on Sensor data & Visualization
- **Adobe Systems** — Noida, India
  Senior Software Development Engineer (SDE II) — *June, 2017 - Aug, 2019*
  - **Vector Graphics Editing App**: Development of vector image editing iOS app based on Adobe Illustrator, in particular on Pen, Direct Selection and Snapping tool.
  - **Experience Manager**: Handled both front-end and back-end aspects of Interactive Communication Applications, Data Integration Services, Document Fragment and Letter-based Services, as a part of cloud suite solution for business process automation services
- **Adobe Big-Data Experience Lab (BEL), Adobe Research** — Bangalore, India
  Research Intern, Bachelor's Summer Training — *May 2016 - July, 2016*
  - **Data Analytics**: Analytics of Multi-Channel Customer Data using Applied Machine Learning models and to predict customer affinity comparisons for interaction in a specific channel, given limited information of interaction across other channels too.
- **IBM India Research Laboratory (IRL)** — New Delhi, India
  Research Intern (UG Summer Training) — *May 2015 - June, 2015*
  - **Semantic Knowledge Graph**: Supervised Training and Blended Learning for construction of Knowledge Graph model by discovering relations and establishing links between graph nodes; Used text-mining tools; Entity-Extraction, Part-of-Speech Tagging and Similarity Detection to obtain 3D visualization of the growing Knowledge Graph.

Projects

- **Course Management System (DBMS Term Project)**: Developed a complete web-based prototype model for online course design, course calendar publishing, content administration, assignments, and assessments with student registrations and features for self-paced learning - mail service, file transfer, chat forum, calendar, notifications and quizzes
- **Software Component Cataloguing (SoftEngg Term Project)**: A fully functional GUI Software for maintaining a catalogue of various available Software Components, documented using UML diagrams, allowing their potential code reuse.
- **Citation Analysis using Deep Neural Networks (Bachelors Thesis Project)**: Designed framework to label the sentiment an author carried while citing a given paper, using Deep Supervised Learning.
- **Image Deblurring using Convolutional Neural Networks (ML Term Project)**: Implemented a deep convolutional neural network structure for image deconvolution.
- **Supporting Throughput Fairness in IEEE 802.11ac Dynamic Bandwidth Channel Access**: Developed a hybrid adaptive resource reservation mechanism, Hybrid Adaptive DBCA (HA-DBCA) for supporting fair channel access in Dynamic Bandwidth Channel Access (DBCA)
- **Researcher Recommendation System: (IR Term Project)**: Developed a search and recommendation engine for Scientific Research Community to cluster similar authors based on their co-author graph to recommend new co-authors to an author.

Programming Skills

- **Languages**: Python, JAVA, C++, R, MATLAB, Javascript, SQL, Java **Technologies**: Tensorflow, Numpy, OpenCV, Scikit-learn, Caffe

Relevant Coursework

- **Masters**: Machine Learning, Convex Optimization, Probabilistic Graphical Models
- **Bachelors**: Information Retrieval, Speech & Natural Language Processing, Artificial Intelligence, Deep Learning