Shreyas Bhatia

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Education

- **Stony Brook University** — Stony Brook, NY
  Master of Science in Computer Science; GPA: 3.84/4.0 — *Aug. 2017 – Dec. 2018 (Expected)*
- **National Institute of Technology - Bhopal** — Bhopal, India
  Bachelor of Technology in Computer Science; GPA: 8.16/10.0 — *Aug. 2011 – July. 2015*

Experience

- **Adobe Systems Incorporated** — Bangalore, India
  Member of Technical Staff 2 — *Oct 2015 - Jun 2017*
  - Was part of the Installer, Build and Release Team and was mainly responsible for the development of Installers and Release Engineering Activities and end-to-end automation for different Adobe Products
  - Developed various features in Build Scripts like Failure Recovery, Implementation of a Multi-Threaded Build System for Creative Cloud Disk Set
  - Created scripts in Python to facilitate end-to-end automation of tasks involved in release engineering activities reducing the process time from days to a few hours
  - Developed custom actions for installers in C++ and Java to handle new requirements for product installation for different operating systems.

Programming Skills

- **Technical Knowledge**: C, C++, Java, Python, Shell Scripting, SQL, MySql, Machine Learning
- **Web Technology**: BootStrap, HTML5, CSS, Javascript
- **Version Management**: Perforce, Git
- **Operating Systems**: MacOS, Windows, Linux
- **Tools and Technologies**: OpenCV, TensorFlow, CUDA, OpenCL, Jenkins, Jira, Apache Ant

Projects

- **Improved Spam Filtering using non-uniform distribution of values in Hyperlink-Topic Search Algorithm**: Hyperlink-Induced Topic Search is a link analysis algorithm that rates Web pages. The project aims to apply a non-uniform distribution in calculating the hub and authority score to reduce spam which is computed in parallel using CUDA. Twitter Social Network uses a HITS style algorithm to suggest user accounts to follow.
- **A Plugboard Proxy for adding an extra layer of protection to publicly accessible network services**: Designed a plug board proxy which adds an extra layer of protection to publicly accessible network services. Implemented it such that it can act as a client as well as a server, performed AES CTR mode encryption to secure the connection.
- **Parallel Implementation of Histogram Equalization to improve contrast of images**: Improved the contrast of grey-scale images using the Min-Max technique in histogram equalization. Each pixel was processed in parallel using OpenCL to gain an average speedup of 2.3 times on large images.
- **Yelp Restaurant Photo Classification**: Used Deep Learning to predict attribute labels for restaurants using user-submitted photos. It involves using the bottle-next features of a pre-trained CNN and using the OneVsRest technique with a base classifier as a linear SVM to generate tags. The F1-score using this technique was 0.77.
- **Passive Network Monitor**: Built a passive network monitoring application written in C++ using the libpcap library packet capture library. The tool could capture from a user-defined network device and supports BPF filters.

Publications

- **Importance of GPGPUs in efficiency improvement of real-world applications**: The paper discusses GPGPUs, their evolution, and their contribution to many real-world applications in which a GPU through GPGPU has improved their efficiency
- **Improved Parallel PageRank Algorithm for Spam Filtering**: The paper proposes an improved PageRank algorithm that non-uniformly distributes the PageRank values among all the outgoing links. The proposed algorithm attempts to mitigate spam and provide better results by using a non-uniform PageRank distribution. The proposed work has been implemented on NVIDIA Quadro 2000 GPU architecture using CUDA programming language.