Gaurav Verma

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Education

- **Stony Brook University** — **Stony Brook, NY, United States**
  Master of Science in Computer Science; ***GPA 4.0/4.0*** — ***Aug. 2019 – May 2021***
  - **Subjects**: **Compiler Design (Dr. Chapman Barbara), Algorithms, System Security, Data Science, Network Security, Introduction to Science Policy**
- **National Institute of Technology, Surathkal** — **Karnataka, India**
  Bachelor of Technology in Computer Engineering — ***July 2012 – May 2016***

Programming Skills

- **Languages** Python, C, C++, bash, ksh, JavaScript, Java, Oracle PL/SQL, SQL, R, HTML, CSS
- **Technology** AWS, Spark, Hadoop, RDBMS, Netezza, NoSQL, DynamoDB, Flask, Docker, Hive

Ongoing Projects

- **Exascale Programming Models Laboratory** — **Stony Brook University, NY**
  Institute of Advanced Computational Science, ***Graduate Research Assistant*** — ***Oct 2019 - Present***
  - **Compilers for Deep Learning and Big Data Applications**: Responsible for researching on XLA from Google for memory optimizations and performance

Experience

- **Lawrence Livermore National Laboratory** — **California, United States**
  Summer Research Intern — ***May 2020 - Aug 2020 (Tentative)***
  - **Project based on High Performance Computing, Parallel Computing, and OpenMP**: TBD
- **Amazon Web Services (AWS)** — **Stony Brook University, United States**
  AWS Educate Student Ambassador — ***May 2020 - Present***
- **Fidelity Investments** — **Bangalore, India**
  Lead Software Engineer — ***March 2019 – July 2019***
  - **Snowflake Based Reconciliation Framework (Data Warehousing)**: Instituted a reconciliation framework on Snowflake and Oracle DB to validate 350GB+ data between on premise Oracle DB and Snowflake for over 20 million 401K customers in USA contributing to total assets of worth $6.5 Trillion

  Software Engineer — ***July 2016 – March 2019***
  - **Big Data**: Developed an asynchronous pipeline for processing over 35TB of Customer's Data spanning whole USA (8 regions) on a daily basis using Spark, AWS and Hadoop. Streamlined generic data flow from Unix Server, HDFS, Oracle DB and Netezza DB to Amazon AWS using Apache NiFi
  - **Data Analytics**: Initiated and systematized a new business capability in Data Analytics. Developed an Opinion mining Framework to find insights in Call Logs using Bi-directional LSTM and AWS Comprehend
- **Samsung Research Institute** — **Bangalore, India**
  Summer Intern — ***May 2015 - July 2015***
  - **Named Entity Recognition (NLP)**: Analyzed the NER mechanism and achieved an accuracy of 98.1%

Publications

- **Watermarking Algorithm-to avert misinterpretation of ATM card**: Procedia Computer Science, Volume 89, 2016, Gaurav Verma, Sanket M Gawande, Mayank Bhura, Shashidhar Koolagudi
- **Analysis of Green design for Cloud Resource Procurement**: 2015. Procedia Computer Science, Volume 54, Doshi Chintan Ketankumar, Gaurav Verma and K. Chandrasekaran
- **Cluster Based Routing in Named Data Networking**: 2015. International Conference on Information Technology: New Generations, Nevada, Las Vegas, US. IEEE. Gaurav Verma, Arun Nandewal, K. Chandrasekaran

Past Research and Projects

- **Temporary Email Analysis, Ethos Laboratory**: Designed and developed a distributed architecture to investigate defense loopholes in 1 million+ emails using ELK Stack amongst social media, pharmaceutical, and government domains; Guide: Dr. Amir Rahmati
- **1-Factorization in Regular Graphs**: Proved semi-perfect 1-factorization conjecture for complete Bipartite graphs using Konig's Theorem, Vizing's theorem and techniques like box-product of a graph; Guide: Dr. Manu Basavaraju
- **Automatic Segmentation of Closed-Contour Features in Ophthalmic Images**: Researched and implemented a framework to segment arbitrarily shaped, closed-contour features on spectral domain optical coherence tomography images using graph theory and dynamic programming; Guide: Dr. Jeny Rajan

Achievements

Jawaharlal Nehru Center for Advanced Scientific Research Fellowship May 2014 — July 2014