Eashan Adhikarla

10 Duh Drive, Saucon Village, Bethlehem, PA - 18015.
+1(650)695-9272 eashanadhikarla eashanadhikarla
eaa418@lehigh.edu, aeashan@gmail.com
eashanadhikarla.github.io

OBJECTIVE

To acquire a challenging summer research position utilizing my skills in Machine Learning, Data Science, Knowledge Discovery and Information Retrieval.

EDUCATION

Lehigh University, GPA - 3.6*/4.0 **Bethlehem, PA**
Ph.D. in Computer Science (Machine Learning) Aug 2020 - Present

Lehigh University, GPA - 3.6/4.0 **Bethlehem, PA**
M.S. in Computer Science Aug 2018 - May 2020

Rajiv Gandhi Proudyogiki Vishwavidyalaya (RGPV), GPA - 3.7/4.0 **Bhopal, MP**
B.E. in Computer Science Aug 2013 - May 2017

EXPERIENCE

National Science Foundation **Bethlehem, PA**
Peer Mentor, (Supervisor: Dr. Brian D. Davison) May 2020 - Aug 2020
- Mentoring and closely guiding 15 NSF-REU Interns on-site project.
- CNS-1757787 - Award

Resilience Research Group for SARS-CoV-2 **Bethlehem, PA**
Research Assistant, (Supervisor: Dr. Brian D. Davison) May 2020 - Aug 2020
- Image Gathering for face masks in the United States and designing a novel face-mask detection algorithm for a data science survey research on SARS-CoV-2.
- NSF Award 1841338 - Cultural-Perceptions-of-Risk-Behavioral-Responses

Lawrence Berkeley National Laboratory (LBNL) **Berkeley, CA**
Research Intern (NERSC), (Supervisor: Dr. Brian Austin) May 2019 - Aug 2019
- Developed scripts to fetch and analyze terabytes of data from the SLURM scheduler.
- Analyzed & estimated real-time queues in the scheduler for optimizing the policies for incoming jobs.
- Developed three real-time policies that potentially improved the allocation procedure.

Persistent Systems **Pune, MH**
Machine learning Intern — Software Engineering May 2019 - Aug 2019
- Developed a facial recognition and verification system using Google's FaceNET research as the baseline which can directly learn from the 128x128 low dimensional representation.
- Added additional OpenCV features on top of it, which can differentiate between 3-D and 2-D images (a drawback of Google's FaceNET)
- Designed a purely browser-based RSA compliant module to work with FIDO keys.

RESEARCH PROJECTS

Auto-encoder with Memory Defense Aug 2020

- Developed a facial recognition and verification system using Google's FaceNET research as the baseline which can directly learn from the 128x128 low dimensional representation.
- Added additional OpenCV features on top of it, which can differentiate between 3-D and 2-D images (a drawback of Google's FaceNET)
- Designed a purely browser-based RSA compliant module to work with FIDO keys.

Sequence Generative Adversarial Nets with Policy Gradient Jan 2020

- Seq-GAN is a unique approach which models the data generator as a stochastic policy in reinforcement learning to solve the problem with improvements in pre-processing.
- The RL reward signal comes from the GAN discriminator judged on a complete sequence, and is passed back to the intermediate state-action steps using Monte Carlo search.

Facial Recognition and Verification System Jan 2017

- Working with the accuracies and flaw removal strategies with re-implementation of Open-Face, for improving the range of applications in the domain of Security.
- Resolved the false positive 2-D inputs by introducing more features in Stage 1 (face detection) as a.) Orientation Normalization b.) 3D surface representation.

PUBLICATIONS

- Estimating an HPC Facility's Capacity For Accommodating Real-time Workflows, Thesis, *National Energy Research Scientific Computing (NERSC), 2019*

SKILLS

Programming Languages - C++, Python, Bash, Scala
Web Backend Technologies - MySql, MongoDB, NoSQL, HTML5.
Web Frontend Technologies - Pytorch, Tensorflow, OpenCV, dlib, Boost-C++, Cmake, scikit-learn, Apache Spark, git, Latex

TEACHING

- CSE 017 - Programming and Data Structures Fall 2020
- CSE 017 - Programming and Data Structures Fall 2019
- CSE 160 - Introduction to Data Science Spring 2019
- CSE 001 - Breadth of Computing Fall 2018