Eashan Adhikarla

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OBJECTIVE

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

EDUCATION

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

Lehigh University — Bethlehem, PA
M.S. in Computer Science — **GPA** - 3.6/4.0

Rajiv Gandhi Proudyogiki Vishwavidyalaya (RGPV) — Bethlehem, PA
B.E. in Computer Science — **GPA** - 3.7/4.0

EXPERIENCE

National Science Foundation — **Bethlehem, PA**
Peer Mentor — May 2020 - Aug 2020
- Mentoring and closely guiding 15 NSF-REU Interns on-site project.
- CNS-1757787 - https://www.nsf.gov/awardsearch/showAward

Resilience Research Group for SARS-CoV-2 — **Bethlehem, PA**
Research Assistant — 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 - https://converge.colorado.edu/∼cultural-perceptions-of-risk-behavioral-respo-nses-and-community-resilience-in-covid-19

Lawrence Berkeley National Laboratory (LBNL) — **Berkeley, CA**
Research Intern (NERSC) — 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)
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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.

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

ACHIEVEMENTS & AWARDS

- Awarded by Cognizant, for the **Outstanding Project Award** in Facial Recognition with Deep Neural Network (2016-17)
- **Best Project Award** by the Department of Computer Science in RGPV university for 'Physical Intrusion Detection System' (2015-16)
- Ranked among **top 1 percentile** in TESTimony'16 organised by Tata Consultancy Services. (2015)
- Awarded by H.C.Verma (Experimental Physicist): Winner of the **National Level SCEECS'16**: Quiz Competition organised by National Institute of Technology, Bhopal (MANIT). (2015)
- Awarded a Trophy from **Central Board of Secondary Education** (CBSE) for performance in English subject (2013)

- Presented a Abstract Paper on Shell-shock Vulnerability at **National level technical symposium** in Bhopal: Which explained about how the attack vector works, the risks involved and how to mitigate them. This explanation of the Shell-Shock CVE was published in the National conference Magazine published by LNCT Group of College Bhopal. (2014)
- **All India Rank 598** in International Maths-Science Olympiads (2007)

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