Vishvak S Murahari

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EDUCATION

GEORGIA INSTITUTE OF TECHNOLOGY

MS in Computer Science
GPA: 4.0 / 4.0
Aug 2018 - May 2020
Specialization: Machine Learning

BS in Computer Science
May 2015- May 2018
GPA: 3.96 / 4.0
Threads: AI and Devices

COURSEWORK

• Math. Foundations of ML
• Deep Learning • ML Theory
• NLP • Machine Learning
• Reinforcement Learning
• Computer Vision • Algorithms
• Data and Visual Analytics
• Systems and Networks

SKILLS

PROFICIENT IN

• Python • C# • C • C++
• Java • MATLAB • Assembly

ADDITIONAL SKILLS

• NumPy • Pandas • Scikit-Learn
• Open CV • Linux Environments
• Unit Testing • Agile Development

SOFTWARE

• PyTorch • TensorFlow • Git
• Android Studio • Visual Studio
• Gradle • Eclipse • PyCharm• ROS

AWARDS

• Faculty Honors for 5 semesters
• 1st in Indian Robotic Olympiad, 2014
• 4th in Indian Robotic Olympiad, 2013

INVOLVEMENT

• Artificial Intelligence Club
• RoboJackets

LEADERSHIP

• TA, Computing for Engineers
• Math Tutor, Blind Relief Association
• President, RoboKnights
Delhi Public School RK Puram, Delhi

WORK EXPERIENCE

MICROSOFT | Software Engineering Intern
May 2019 – July 2019 | Redmond, WA

- Built data-driven models to do query re-formulation and improve email search relevance in Outlook 365.
- Built ML models to detect and update irrelevant user search queries.

MICROSOFT | Software Engineering Intern
May 2018 – July 2018 | Redmond, WA

- Built a real-time ML architecture to recommend game suggestions to Xbox users. Preliminary results show significant improvement in engagement.
- Developed Gradient Boosted Tree Models to learn user engagement behavior on the Xbox Console given user behavior history over multiple days and weeks.
- Designed objective evaluation metrics to gauge user engagement.

MICROSOFT | Software Engineering Intern
May 2017 – Jul 2017 | Redmond, WA

- Designed a low latency system in C# to process privacy requests from Windows users to delete sensitive personal data.
- Designed a delete processor to back a highly scalable privacy dashboard for all Windows 10 users.
- Developed an algorithm to predict server running costs for teams at Microsoft.

PEGA | Software Engineering Intern
May 2016 – Jul 2016 | Atlanta, GA

- Automated dozens of daily business processes by creating bot agents that automatically navigate business applications.
- Developed a bot creation framework in C# for PEGA clients to accelerate creation of task-specific bots.

RESEARCH

DIALOG SYSTEMS
Aug 2018 – Present | Atlanta, GA | Prof. Devi Parikh

- **Lead author on EMNLP 2019 paper on training diverse and visually grounded Visual Dialog agents with RL.**
- Prototyping transfer learning approaches on task oriented dialog datasets.
- Working on techniques to prevent policies diverging from grammatical language during RL Training of dialogue systems.

REPRESENTATION LEARNING FOR ACTIVITY RECOGNITION
Jan 2018 – Jul 2018 | Atlanta, GA | Prof. Thomas Ploetz

- Developed novel neural net architecture using attention models for Human Activity Recognition. **Lead author on accepted paper at ISWC 2018 (Premier wearable computing conference).**
- Achieved state of the art performance on benchmark HAR data sets.

TEACHING

INTRO TO AI; INTRO TO ROBOTICS AND PERCEPTION | TA
Jan 2017 – Present | Atlanta, GA

- Guided more than 300 students on AI projects and homework.
- Reinforced concepts ranging from probabilistic inference to Neural Networks, Optimization and Reinforcement Leaning.
- Advised students on robotic planning, control and localization .