

EDUCATION

Georgia Institute of Technology

Masters of Science in Computer Science (Specialization: Machine Learning)

GPA: 4.0/4.0

Atlanta, USA

Aug 2018 – Present

Georgia Institute of Technology

Bachelors of Science in Computer Science (Specialization: Artificial Intelligence and Devices)

GPA: 3.96/4.0 (Highest Honors)

Atlanta, USA

Aug 2015 – May 2018

RESEARCH INTERESTS

Natural Language Processing, Deep Learning, Reinforcement Learning, Computer Vision

PUBLICATIONS

Large-scale Pretraining for Visual Dialog: A Simple State-of-the-Art Baseline [\[Paper\]](#) [\[Code\]](#)

Vishvak Murahari, Dhruv Batra, Devi Parikh, Abhishek Das

arxiv preprint

Improving Generative Visual Dialog by Answering Diverse Questions [\[Paper\]](#) [\[Code\]](#) [\[Poster\]](#)

Vishvak Murahari, Prithivijit Chattopadhyay, Dhruv Batra, Devi Parikh, Abhishek Das

Empirical Methods in Natural Language Processing (EMNLP) 2019

On attention models for human activity recognition [\[Paper\]](#)

Vishvak Murahari, Thomas Ploetz

International Symposium on Wearable Computers (ISWC) 2018

AWARDS AND ACHIEVEMENTS

- Awarded Faculty Honors by Georgia Tech for 5 out of 6 semesters in my undergraduate degree.
- Represented India at the World Robotics Olympiad in 2013 and 2014.
- Selected for the prestigious NTSE scholarship offered by the Govt. of India
- Awarded 1st prize in the Indian Robotic Olympiad, 2014 and placed 4th in Indian Robotic Olympiad, 2013.

WORK EXPERIENCE

MICROSOFT

Engineering Intern

Redmond, WA

May 2019 - July 2019

- 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

Engineering Intern

Redmond, WA

May 2018 - July 2018

- 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

Engineering Intern

Redmond, WA

May 2017 - July 2017

- 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

Engineering Intern

Atlanta, GA

May 2016 - July 2016

- Automated daily business processes by creating bot agents to automatically navigate business applications.
- Developed a bot creation framework in C# for PEGA clients to accelerate creation of task-specific bots.
- Designed an intuitive user interface for analysts to interact with and deploy bots with ease.

TEACHING

Introduction to Robotics and Perception

Teaching Assistant

Atlanta, GA

Fall 2018,2019 ; Spring 2018,2019

- Advised more than 300 students on robotic planning, control and localization.
- Collaborated with co-TAs to create projects on robot localization.

Introduction to Artificial Intelligence (AI)

Teaching Assistant

Atlanta, GA

Fall 2017, Spring 2017

- Guided more than 300 students on AI projects ranging from probabilistic inference to Neural Networks, Optimization and Reinforcement Learning.

Computing for Engineers

Teaching Assistant

Atlanta, GA

Fall 2016, Spring 2016

- Advised more than 1000 students on MATLAB projects introducing the fundamentals of computing.
- Taught a 90 minute weekly recitation and collaborated with co-TAs to create weekly assignments.

SELECTED PROJECTS

Real-time Gesture Recognition on Wearables

- Designed a novel machine learning pipeline for real time gesture recognition on off-the-shelf devices.
- Deployed the system on Google Glass and optimized performance in everyday settings.

How much should you rent your home for? A recommendation tool for renting Airbnbs

- Devised Machine Learning approaches to model Airbnb prices by leveraging both Airbnb and Zillow listings and created interactive map-based visualizations of average prices across the United States.

Everybody Dance Now

- Implementation of Chan et. al (ICCV 19)

Autonomous Robotics: Intelligent Ground Vehicle Competition (IGVC)

- Developed an intelligent algorithm for an autonomous robot to detect waypoints in a multi-terrain outdoor environment for IGVC, an inter-collegiate robotics competition.

SkinScan: A simple skin cancer detection approach with Deep Learning

- Designed a skin cancer detection approach by finetuning GoogLeNet on datasets containing images of cancerous patches of skin.

SERVICE ROLES AND ACADEMIC ACTIVITIES

Challenge Organization

Visual Dialog Challenge

CVPR 2020

Workshop Organization

Visual Question Answering and Dialog Workshop

CVPR 2020

SKILLS

- **Languages:** Python, C, C++, C#, Java , MATLAB
- **Frameworks:** PyTorch, NumPy, Pandas, Scikit-Learn, Open CV
- **DevOps:** Amazon Web Services, Google Cloud
- **Version Control:** Git
- **Mobile Applications:** Android

SELECTED COURSEWORK

- Mathematical Foundations of ML • Deep Learning • NLP • Machine Learning • Adaptive Control and RL
- ML Theory • Computer Vision • Algorithms • Data and Visual Analytics • Systems and Networks