

Varun Agrawal | Résumé

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Education

Georgia Institute of Technology

PhD Computer Science, School of Interactive Computing

Advised by Dr. Irfan Essa & Dr. James Hays

Atlanta, GA

2017–Present

Georgia Institute of Technology

MS Computer Science

Specializing in Computational Perception, Robotics, & Machine Learning

Thesis: Learning Visual Attributes, Advisor: Dr. James Hays

Atlanta, GA

2015–2017

National Institute of Technology

B.Tech (magna cum laude), Computer Science and Engineering

Thesis: A Fast Facial Expression Recognition System, Advisor: Dr. M. A. Zaveri

Surat, India

2009–2013

Research & Publications

TextureGAN: Controlling Deep Image Synthesis with Texture Patches

CVPR 2018

Learning Visual Attributes - The Good, the Bad and the Ugly

MS Thesis

Adaptive Industrial Robot Control for Designers

eCAADe 2017

Web-based Tools For Supporting Student-driven Capstone Design Team Formation

ASEE 2017

OneGroup - Easy Group Photo Sharing using Temporal Dynamics

Microsoft Research Faculty Summit, 2016

Real Time Edge Based Tracking for Robotics

NNMI Poster Session, 2016

Indexing Music Based On Lyrical Concepts, Poster

Microsoft Machine Learning and Data Science Conference, 2015

Exam Rank Expert Classification System

Provisional Patent Number:2308/MUM/2014

Fast Facial Expression Recognition

Undergraduate Thesis, 2013

Work Experience

Eye Team, Georgia Tech

Graduate Research Assistant

Researcher on various topics in Computer Vision, Machine Learning, Graphics and Robotics.

Atlanta, GA

Spring 2018

CS 4476/6476 Computer Vision, Georgia Tech

Graduate Teaching Assistant

Graduate Teaching Assistant for the Undergraduate and Graduate Computer Vision class taught by Prof. James Hays. Responsibilities include assisting students on various Computer Vision assignments related to Scene Understanding, Face Recognition and Deep Learning, as well as providing clarifications on concepts and grading.

Atlanta, GA

Fall 2016, 2017

Collaborative & Advanced Robotic Manufacturing Lab, Georgia Tech

Graduate Research Assistant

The Collaborative & Advanced Robotic Manufacturing Lab (CARM) performs applied research in perception and robotics with the goal of turning fundamental research performed by Georgia Tech into actionable systems that can be used by Georgia Tech's industry partners. Advised by Dr. Larry Sweet.

- Pick-and-Place project to detect and track objects in cluttered environments using ROS and UR10 robots, with DENSO Manufacturing.
- Dual Robot Manufacturing and Redundancy Resolution for fuselage manufacturing with Boeing. I wrote the KUKA KRC drivers to allow for direct robot interfacing that is used by various labs in Georgia Tech.
- Project to develop an edge based tracker that uses state of the art Computer Vision techniques to track a car door in real time with a latency of 5ms with PSA Peugeot.

Atlanta, GA

2015–2016

Pindrop*Software Engineer Intern***Atlanta, GA***May 2016–July 2016*

- Worked with the Cloud Services team to develop microservices for calculating phone reputation scores in order to gauge the veracity of a possibly fraudulent phone calls.
- Used Python, Go and Docker to build highly scalable services and APIs to service 10 of the 15 largest financial institutions in the U.S., saving up to \$10 million annually from phone call fraud.

Microsoft Corporation*Software Engineer, MACH***Hyderabad, India***2013–2015*

- Microsoft Key Talent FY15
- Built a Data Analytics Toolbox for analyzing petabytes of cross-domain data and inferring data items and results to power various scenarios for the Entertainment Segments within the Bing search engine.
- Services and apps to power Microsoft's Quoting, Agreements and Core Services in the Enterprise Commerce space, responsible for over \$60 billion of Microsoft's enterprise revenue.

Microsoft Corporation*Software Engineer Intern***Hyderabad, India***May-July 2012*

- Operations tool for the Enterprise Service Bus (ESB).
- Used for real time management of ESB servers and monitoring against failures.

Awards

2017: Marshall D. Williamson Fellowship - Outstanding MS CS student, College of Computing, Georgia Tech

2017: 3rd place in The Home Depot Deep Learning Hackathon at Georgia Tech

2016: 2nd - Microsoft Research Open Source Challenge

2015: 3rd - Microsoft India Build The Shield CTF Competition

2014: Microsoft FY15 Key Talent Award

2014: 1st - Microsoft India General Quiz

2014: 1st - Microsoft Capture The Flag Competition

2012: 6th in India - SecurIT All India Capture Flag (InCTF)

2012: 64th/1300 - **ACM ICPC** On-site National Round

2011: 1st in India - Amazon What's Your Cloud Idea? Competition