

Varun Agrawal | Résumé

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Education

Georgia Institute of Technology

PhD Computer Science, School of Interactive Computing

Advised by Dr. James Hays & Dr. Irfan Essa

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

Experience

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.

- Dual Robot Manufacturing and Redundancy Resolution for fuselage manufacturing with Boeing.
- Project with PSA Peugeot where we developed 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.
- Use of the KUKA 210 industrial robot and the Universal Robots UR5 collaborative robot to perform actuation on the object being tracked akin to actual factory settings.

Atlanta, GA

2015–2017

Pindrop

Software Engineer Intern

- 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.

Atlanta, GA

May 2016–July 2016

Microsoft Corporation

Software Engineer, MACH

- 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.

Hyderabad, India

2013–2015

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.

Research & Publications

Learning Visual Attributes - The Good, the Bad and the Ugly	<i>MS Thesis</i>
Adaptive Industrial Robot Control for Designers	<i>eCAADe 2017</i>
Web-based Tools For Supporting Student-driven Capstone Design Team Formation	<i>ASEE 2017</i>
Dual Robotic Manufacturing, Poster and Demo	<i>Boeing - Georgia Tech Demo Day, 2016</i>
OneGroup - Easy Group Photo Sharing using Temporal Dynamics	<i>Microsoft Research Faculty Summit, 2016</i>
Real Time Edge Based Tracking for Robotics	<i>NNMI Poster Session, 2016</i>
Large Scale Multi Label Annotation on the Yelp Image Dataset	<i>Yelp Data Challenge, 2016</i>
Indexing Music Based On Lyrical Concepts, Poster	<i>Microsoft Machine Learning and Data Science Conference, 2015</i>
Exam Rank Expert Classification System	<i>Provisional Patent Number:2308/MUM/2014</i>
Fast Facial Expression Recognition	<i>Undergraduate Thesis, 2013</i>
Active Contour Models and Particle Filters for Object Tracking	<i>Undergraduate Research Seminar, 2012</i>

Awards

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

Soft Skills

- Programming Polyglot
- Excellent Debugging Skills
- Open Source Contributor
- Quick Learner
- Self Motivated
- Team Player
- Passion for Excellence