

# Siddhartha Banerjee

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## EDUCATION

### GEORGIA INST. OF TECH.

#### PH.D. IN ROBOTICS

May 2021 | Atlanta, GA

Title: Facilitating Reliable Autonomy with Human-Robot Interaction

Advised by Dr. Sonia Chernova

### YALE UNIVERSITY

#### B.S. IN ELECTRICAL

#### ENGINEERING/COMPUTER SCIENCE

May 2013 | New Haven, CT

Distinction in Major

GPA: 3.7 / 4.0

## LINKS

Github:// [banerjs](#)

LinkedIn:// [banerjs](#)

## COURSEWORK

### GRADUATE

Artificial Intelligence (Student & TA)

Deep Learning

Linear Systems & Control

Nonlinear Systems

Human-Robot Interaction (Student & TA)

Human-Computer Interaction

Evaluation of Human Integrated Systems

### UNDERGRADUATE

Intro to VLSI System Design

Systems & Control

Science of Complex Systems

Systems Programming

Design & Analysis of Algorithms

Intelligent Robotics

Computational Vision

Database Systems

Mobile Computing & Wireless Networks

## PROGRAMMING

### LANGUAGES

Python • C++ • C • Java • C#

MATLAB • Javascript • R • SQL

### FRAMEWORKS

ROS • PyTorch • scikit-learn • Jupyter

ReactJS • NextJS • NestJS • Django

Docker • Ansible • Terraform

gRPC • SocketIO • WebRTC (basic)

## WORK EXPERIENCE

### DILIGENT ROBOTICS | LEAD ROBOTICS SOFTWARE ENGINEER

May 2018 - August 2018, January 2021 - December 2024 | Austin, TX

- Led a team of 9 engineers on cloud and robot applications; planned quarterly roadmaps, oversaw sprint progress, and conducted monthly architecture reviews with the CTO on projects, vendors, tech debt, and system health.
- Built remote robot management software, growing from 1 to 100+ robots across 30+ clients; enabled new hospital workflows and integrations, boosting adoption; improved reliability by cutting average operator intervention time to <30s and scaling operator-to-robot ratio to >1:7.
- Contributed across the full software stack (robot, cloud, embedded); primary developer and maintainer of remote operations, task execution, and scheduling; integrated new systems, onboarded vendors, incorporated new hardware, and supported client implementations.

### MICROSOFT | RESEARCH INTERN

May 2017 - August 2017 | Seattle, WA

- Contributed to the Situated Interaction Group's development of agents for seamless human interaction in real-world environments.
- Configured a robot to update activity recognition models in-the-wild; evaluated different person and pose detection algorithms on the robot as a first step.

### REDFIN | SOFTWARE ENGINEER II

July 2013 - June 2015 | Seattle, WA

- Enhanced and maintained ETL pipelines for house listing data, driving Redfin's market expansion by >120% (2013-2015); integrated GIS data from multiple providers and built tools for data disambiguation.
- Aggregated housing data by region to enhance user experience and reduce historical tech debt.

## AWARDS & LEADERSHIP

2019	Panel Chair	HRI Pioneers Workshop
2017-2018	President	Georgia Tech RoboGrads
2014	Employee of Quarter	Redfin
2011	Fellow	Yale Entrepreneurial Institute Summer Fellowship
2011-2012	Vice-President	Yale Formula Hybrid FSAE Team

## NOTABLE PUBLICATIONS

- [1] S. Banerjee, A. Silva, and S. Chernova, "Robot classification of human interruptibility and a study of its effects," *Trans. on Human-Robot Interaction*, 2018.
- [2] D. Das, S. Banerjee, and S. Chernova, "Explainable ai for robot failures: Generating explanations that improve user assistance in fault recovery," in *Proc. Int. Conf. on Human-Robot Interaction (HRI), best paper award*, 2021.

## SELECT PROJECTS

### FETCHIT! CHALLENGE | ROBOTICS COMPETITION

Summer 2019 | ICRA

Developed robot software to complete a mobile manipulation challenge at the ICRA 2019 FetchIt! Challenge hosted by Fetch Robotics. The team placed first, winning a Fetch mobile manipulator robot.

### YALE FORMULA HYBRID FSAE | STUDENT ORGANIZATION

2009 - 2013 | Yale

Designed and built formula style gas-electric hybrid cars to compete nationally. Team won several awards including Best Hybrid Car (2013), Ford Efficiency (2013), Chrysler Innovation (2013), & GM Best Engineered Hybrid System (2010, 2013)