Dhruva Bansal

dbansal36@gatech.edu | 404.543.3347 | LinkedIn:// dhruvabansal2k | Github:// DhruvaBansal00

EDUCATION

STANFORD UNIVERSITY
MS in Computer Science
Sep 2021 - June 2023
Conc. Artificial Intelligence

GEORGIA TECH
BS in Computer Science
Aug 2018 - May 2021
GPA: 4.00/ 4.00
Intelligence and Theory

PUBLICATIONS

CHI 2021
IROS 2020
MobiSys 2019

PRESENTATIONS

CHI 2021
GVU Showcase Spring'19
UROP Symposium'19

AWARDS

President's Research Award
MobiSys 2019 Best Poster
Faculty Honors
Dean's list
HackGT 5 - Accessibility

SKILLS

SOFTWARE

Proficient:
Python • Java • Pytorch • C++
OpenCV • Git • Keras • ROS
TensorFlow • JavaScript
Node.js

Familiar:
Bash • Matlab • MongoDB
C♯ • Docker

COURSEWORK

UNDERGRADUATE
Imitation Robot Learning
Deep Learning
Computer Vision
Machine Learning
Advanced Algorithms
Robotics and Perception
Artificial Intelligence
Systems and Networks

CLUBS

RoboJackets
India Club @ Georgia Tech

EXPERIENCE

AMAZON ROBOTICS | Incoming Software Engineering Intern
May 2021 - Aug 2021 | Boston, MA

HONEYWELL INC. | Software Engineering Intern
May 2019 - July 2019 | Atlanta, GA

- Built an app to extract data from scanned documents using **Python** and **TensorFlow**
- Analyzed industrial data using **Node** and **MongoDB** to build upon existing APIs
- Wrote production ready code for handling **3 million requests/month**

EMOTION ROBOTICS | Software Engineering Intern
September 2017 – June 2018 | Sugar Land, Texas

- Developed a framework for autonomous UAVs from scratch
- Established autonomous capabilities by incorporating **MAVLink** and **OpenCV**

RESEARCH

GEORGIA TECH RAIL | Undergraduate Researcher
Jan 2020 – Present | Atlanta, GA | IROS'20 | RSS'21

- **Paper** titled "LINK: Learning Instance-Level N-Ary Semantic Knowledge At Scale For Robots Operating in Everyday Environments" **submitted to RSS'21**
- **Paper** titled "Anticipatory Human-Robot Collaboration via Multi-Objective Trajectory Optimization" **published at IROS'20**
- Implemented Transformers using **Pytorch** for instance-level commonsense reasoning which outperformed baselines by **11%** on object search accuracy
- Used **Python** and **ROS** to predict human motion for robot trajectory optimization
- Outperformed existing methods in safety, comfort and efficiency metrics by **12%**

GEORGIA TECH CCG | Undergraduate Researcher
August 2018 – Present | Atlanta, GA | PURA'21 | CHI'21

- **Paper** titled "CopyCat: Using Sign Language Recognition to Help Deaf Children Acquire Language Skills" **accepted to CHI'21**
- Received the **President's Undergraduate Research Award** for ASL recognition efforts
- Recognized ASL using HMMs, Tranformers, and 2D hand tracking in **Python** and **Pytorch**
- Demonstrated that HMMs outperform Transformers for ASL recognition by **17%**

GEORGIA TECH UBICOMP | Undergraduate Researcher
August 2018 – May 2019 | Atlanta, GA | MobiSys Best Poster | Patent Pending

- **Poster** titled "Surface++: A Scalable and Self-sustainable Wireless Sound Sensing Surface" received **best poster** award at **MobiSys 2019**
- Performed speech quality analysis using **Python** and **Keras** for Surface++

PROJECTS

Confident Machine Translation | Facebook AI Research
April 2020 - September 2020 | Atlanta, Georgia

- Developed a Confident Machine Translator using **Pytorch** in collaboration with FAIR
- Leveraged language models to classify translations **10%** more accurately than baselines

GT Aerial Robotics | Autonomous Drone Competition
July 2019 - Feb 2020 | Atlanta, Georgia

- Implemented path finding and obstacle recognition for drones in **Python** using **OpenCV**

RoboRacing | RoboJackets
January 2019 - May 2019 | Atlanta, Georgia

- Implemented an autonomous PD controller based upon path planning in **Python**