

# Sahana Pramod Joshi

🌐 sahanajoshi.github.io

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🌐 LinkedIn Profile

☎ 470-439-1670

## EDUCATION

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### Georgia Institute of Technology

Atlanta, GA

*MS in Electrical and Computer Engineering: CGPA-4.0*

*Jan 2021-Dec 2022(Estimated)*

**Relevant Coursework:** Deep Learning, Statistical Machine Learning, Convex Optimization, Math. Foundations for Machine Learning, Advanced Programming Techniques(C++)

### PES University

Bangalore, India

*B.Tech in Electronics and Communication Engineering : CGPA- 9.26*

*August 2018*

*Minor in Computer Science and Engineering : CGPA- 9.35*

*August 2018*

## RESEARCH EXPERIENCE

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### Graduate Research

*May 2021 - Present*

- Conducting research in Self-supervised learning(SSL) as an initialization for Reinforcement Learning(RL) agent to play Starcraft 2.
- Establishing and training an object-detection pipeline(based on SSL) and use the model weights to initialize the agent, hoping to improve sample efficiency.
- Designed a custom loss function to improve generalization of representations. Preparing to publish.

### Undergraduate Research

*Jan 2018 – May 2018*

- Used subjects' EEG signals to determine the intended direction of movement and framed the task as a 4-way linear classification problem on the features extracted using PCA.
- Paper: Stepwise and Quadratic Discriminant Analysis of P300 signals for Controlling a Robot

## TECHNICAL SKILLS

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- **Programming Languages:** Python, Java.
- **Python libraries:** PyTorch, Lightly, Detectron2, TensorFlow, OpenCV, Scikit-learn, Matplotlib, OpenAI Gym, PySC2
- **Web development:** Django, Flask, AngularJS, HTML, REST APIs and web hooks, requests library.
- **Miscellaneous Skills:** shell scripting, deployment of projects using Docker containers, Kubernetes, MySQL, Object-oriented programming concepts, Adobe Photoshop, Android App development.
- **Interpersonal Skills:** Professional communication, conducting technical seminars, project management and planning, teaching and mentoring.

## ACADEMIC PROJECTS

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### RL agent to play Atari games on OpenAI Gym

*Apr 2021 – May 2021*

- Created deep RL agents using algorithms like DQN, Duelling DQN, A2C and A3C that play Atari games, like Breakout, Taxi.

## INDUSTRY EXPERIENCE

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### Georgia Tech

Atlanta, GA

*Graduate Teaching Assistant*

*Jan 2021 - Present*

- Designed programming assignments for Computer Networks course, developed an autograder to automate grading of 200 assignments, saving 30 hours of manual work.
- Conducted Office Hours, explaining concepts with examples drawn from experience at Cisco.

### Cisco Systems Inc.

Bangalore, India

*Network Engineer*

*Aug 2018 - Nov 2020*

- Network infrastructure deployment using Cisco's SDN solutions in the Enterprise and Data Center domains.
- Built several automation and monitoring scripts, still in use today, [link here](#)
- Technical team lead for Docker based deployment of D-HAT monitoring tool at Cisco.
- Conducted workshops on transitioning to Docker based deployment at Cisco.

*Intern*

*Jan 2018 - June 2018*

- Designed and developed a website for booking lab devices to test solutions on.
- Used Django as a framework and AngularJS for the frontend. This project was widely used across teams.

### Adobe Systems Inc.

Bangalore, India

*Intern*

*May 2017 - Jul 2017*

- Compared and benchmarked different deep learning frameworks using the LeNet-5 architecture on MNIST dataset.
- Worked on the initial stages of a Reinforcement Learning based ad-recommendation engine.

## AWARDS AND CERTIFICATIONS

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- Top 10 in Cisco Innovation Challenge, Asia-Pacific region, Jan 2020
- Cisco DevNet Professional and Core Certification
- Gold medalist in B.Tech in ECE.

## LEADERSHIP AND VOLUNTEERING

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- Volunteered for Swacch Bharat Initiative, taught students about menstrual hygiene, also prepared them in Math and abstract logic for a scholarship exam in July 2018.
- Co-ordinated and participated in environmental initiatives in Fridays for Future group- Bangalore chapter
- Created doodles to spread awareness on women issues on my personal social media page.