

# Sahana Pramod Joshi

🌐 sahanajoshi.github.io

✉ sjoshi330@gatech.edu

🌐 LinkedIn Profile

☎ 470-439-1670

## EDUCATION

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**Georgia Institute of Technology**

**Atlanta, GA**

*Master of Science in Electrical and Computer Engineering*

*Jan 2021-Dec 2022(Estimated grad. month)*

**PES University**

**Bangalore, India**

*Bachelor of Technology in Electronics and Communication Engineering : CGPA- 9.26*

*August 2018*

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

*August 2018*

## KEY SKILLS

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- Programming: Python, Java.
- Deep learning libraries: PyTorch and derived libraries like Lightly and Detectron2, TensorFlow, OpenCV, Matplotlib, OpenAI Gym, PySC2
- Web development: Django, Flask, AngularJS, HTML, REST APIs and web hooks, requests library.
- General Technical 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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**Research Project**

*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.

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

*Apr 2021 – May 2021*

- As a final project for Statistical Machine Learning course, created an agent that plays Atari games, like Breakout.
- Conducted experiments using different algorithms like DQN, Duelling DQN, A2C

**Controlling a wheelchair using EEG waves**

*Jan 2018 – May 2018*

- As a final year undergrad project, used subjects' EEG signals to determine the intended direction of movement.
- Framed the task as a 4-way linear classification problem on the features extracted using PCA.
- Publication in IEEE: <https://ieeexplore.ieee.org/document/8903946>

## 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 from scratch along with the starter code to hasten grading of 200 assignment, 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: <https://developer.cisco.com/codeexchange/github/repo/sahanajoshi/dnacataglance/>
- 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.

## **COURSES IN MASTERS PROGRAM**

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- Deep Learning
- Statistical Machine Learning
- Convex Optimization
- Advanced Programming Techniques( C++)
- Math. Foundations for Machine Learning

## **AWARDS AND ACHIEVEMENTS**

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- Top 10 in Cisco Innovation Challenge, Asia-Pacific region, Jan 2020: <https://cisco.innovationchallenge.com/cisco-global-problem-solver-challenge-2021>
- Cisco DevNet Professional and Core Certification: <https://www.credly.com/badges/48fe9c4d-37e2-4ef2-9416-e1005cb9683d> Certification
- Gold medalist in B.Tech in ECE.
- Received acclaim and mentions from project managers and technical leads at Cisco for meeting delivery goals and customer satisfaction, as seen on the LinkedIn profile.

## **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.