

Sahana Pramod Joshi

🌐 sahanajoshi.github.io

✉ sjoshi330@gatech.edu

🌐 LinkedIn Profile

☎ 470-439-1670

EDUCATION

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

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, to improve sample efficiency. Under review CoLLAs 2022.

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

- Programming Languages: Python, Java, C++.
- 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

Adapting a Contrastive Learning RL Baseline(CURL) to encode full transitions Jan 2022 – May 2022

- CURL uses state encodings; the adaptation learns the encoding of the combination of state and next-state encodings along with the action as an auxiliary task to aid the main task of reward maximization.

Denoising using Partial Diff. Equations Jan 2022 – May 2022

- Tried different heuristic methods for denoising using Perona-Malik diffusion and compared their performance on the noise-level decrease achieved.

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

Microsoft Inc. Atlanta, GA
Software Engineering Intern May 2022 - Jul 2022

- Added enhanced process information collection and monitoring for Azure nodes, which will help in understanding node state better.
- Completed project and fully deployed it into production across several data centers.
- Contributed to onboarding documentation and did technical writing for tools used during internship

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

- Deployed network infrastructure 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

- Top 10 in Cisco Innovation Challenge, Asia-Pacific region, Jan 2020
- Cisco DevNet Professional and Core Certification
- Rank 9 among 400 students in B.Tech in ECE at PES University.

LEADERSHIP AND VOLUNTEERING

- Volunteered for Swachh 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.