

# Naveen Narayanan

GitHub: [naveengmu](#) — LinkedIn: [naveen-1999](#) — [navaans@gmail.com](mailto:navaans@gmail.com)

## EDUCATION

- **Georgia Institute of Technology** Atlanta, USA  
*M.S in Computer Science* Aug 2021 - Dec 2022 (Expected)  
Artificial Intelligence, Machine Learning, Big Data Systems & Analytics, Qualitative HCI
- **SSN College of Engineering (Anna University)** Chennai, IN  
*B.E in Computer Science and Engineering; CGPA: 8.39/10* Aug 2017 - July 2021  
Data Structures & Algorithms, Operating Systems, Database Management Systems, Probability & Statistics

## EXPERIENCE

- **PayPal** Chennai, IN  
*Data Scientist Intern, Credit Modelling - Global Data Science (GDS)* Feb 2021 - July 2021
  - Implemented an interpretable deep neural network and an ensemble model (Self-Paced Ensemble) using Light gradient boosting machine for credit underwriting for the [Buy Now Pay Later](#) product. K-S Test of 47.9% and 49.7% was achieved respectively - comparable to state of the art
  - Created **Duenna**, an employee feedback bot built for MS Teams, for non-intrusive, anonymous data collection and assessment. Deployed in 6 teams in the GDS vertical helping managers evaluate mental & physical wellness
- **Solarillion Foundation** Chennai, IN  
*Undergraduate Research and Teaching Assistant* Feb 2019 - Jan 2021
  - Refer to projects [1] and [2] under Research And Projects section
  - **Server Administrator** - Work space automation (scripting), Network-Attached storage maintenance
- **AIcrowd**  
*Machine Learning Intern* Aug 2020 - Dec 2020
  - In-house research and designing baselines for the Food Recognition Challenge (Image Segmentation Challenge)
  - Problem Designer - [Pixel wise satellite image classification problem](#), [Captcha detection challenge](#)

## RESEARCH AND PROJECTS

- **[1] End-to-end Deep Learning For Reliable Cardiac Activity Monitoring Using Seismocardiograms**  
*Published at 19<sup>TH</sup> IEEE International Conference on Machine Learning and Applications (ICMLA) 2020, Florida, USA*  
Designed a neural network for continuous and non-intrusive monitoring of cardiac activity using seismocardiograms - obviated the need for extracting hand-crafted features and signal processing techniques - achieved overall Sensitivity and Positive Predictive Value of 0.98 and 0.98 respectively
- **[2] Scalable Deep Learning For Stress And Affect Detection On Resource-Constrained Devices**  
*Published at 18<sup>TH</sup> IEEE ICMLA 2019, Florida, USA*  
Worked on light-weight deep learning algorithms for stress detection on resource-constrained devices - absolute increase of 10% in overall accuracy and 18x reduction in inference times on-device over benchmarks
- **GrocerStop - A WebApp / Flutter Application** April 2020 - June 2020  
*Restart India 2020 Hackathon, 3rd Place [Python, Flask, React, Heroku]*  
Web App to monitor, control and manage crowds at departmental stores for preventing spread of COVID-19.
- **TARS: Workplace Automation Bot for Solarillion Foundation** May 2020 - Aug 2020  
*[Python, Flask, Heroku]*  
Automated the process of updating the official website via Slack. Removed manual redundant work and helped 50+ students in the foundation
- **Federated Learning for Pneumonia Image Classification** Nov 2020 - April 2021  
*Accepted at IEEE MIT Undergraduate Research Technology Conference 2021 [PyTorch, Python, Flask]*  
Investigated Federated Learning (FL) strategies on 2 real-world scenarios for Pneumonia Classification using chest X-ray images. Performance of FL simulations on par with centralized training paradigms
- **Deep Learning For UI Element Detection: DrawnUI 2020**  
*2nd Place in Leaderboard, Working notes published at 11<sup>TH</sup> CLEF 2020, Thessaloniki, Greece*

## SKILLS

- **Programming Languages:** Python, C++, C, SQL, JavaScript, Java
- **Frameworks and Libraries:** PyTorch, Tensorflow, Git, Scikit-learn, Keras, Flask, Docker, GCP, AWS, MongoDB, HTML, CSS, NumPy, Pandas, REST API's

## ACHIEVEMENTS AND LEADERSHIP ROLES

- 1 among 150 candidates accepted for the [Google AI Summer School 2020](#) by Google Research India
- Vice-President Membership, Secretary of a Toastmasters International Club (Public Speaking Club) (2019 - 2020)