AAKASH KRISHNA GS

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TECHNICAL SKILLS

- **Areas:** Machine Learning, Artificial Intelligence, Artificial Neural Networks, Reinforcement Learning, Computer Vision, Natural Language Processing
- **Languages:** Python, Java

WORK EXPERIENCE

TCS Research and Innovation **Bangalore, India**
Research Engineer, Data and Decision Sciences Group *July 2019 to present*

- Built an Electric Vehicle (EV) user behavior and traffic simulator for Luxembourg City
- Developed Reinforcement Learning based pricing algorithms to manage demand-supply of EV Chargers
- Developed a parallel execution system to help speed up and automate the training process, cutting execution times in half

TCS Research and Innovation **Hyderabad, India**
Research Intern, Data and Decision Sciences Group *January 2019 to July 2019*

- Implemented several cyber physical models for solar PhotoVoltaic (PV) cells
- Built a test suite for analyzing large scale solar PV behavior
- This test suite helped validate existing and develop new fault detection and classification algorithms

Thermo Fisher Scientific **Bangalore, India**
Software Development Intern *May 2018 to July 2018*

- Responsible for building an automation solution for the Thermo Scientific Spinnaker™
- Built a custom dataset and trained CNN based object detectors to help the robotic arm identify specific locations for different Thermo Scientific instruments

EDUCATION

B. Tech Computer Science **Coimbatore, India**
Amrita School of Engineering *2015 to 2019*

- Graduated **First Class with Distinction**
- **9.3/10** CGPA
- Top **10%** of class

12th Grade **Coimbatore, India**
Suguna PIP School, CBSE *2014 to 2015*

- **96.5%**
- Top **5%** in school

PUBLICATIONS

[1] **Aakash Krishna**, Ajay Narayanan, Sunil Krishnakumar, Prasant Misra, Arunchandar Vasan, Venkatesh Sarangan, and Anand Sivasubramaniam. 2020. "Uberizing The Charging Ecosystem For Electric Vehicles". Proceedings Of The Eleventh ACM International Conference On Future Energy Systems. doi:10.1145/3396851.3397758.

[2] **Aakash Krishna GS**, Vijay Nirmal Pon, Saumya Rai, and A Baskar. 2020. "Vision System With 3D Audio Feedback To Assist Navigation For Visually Impaired". Procedia Computer Science 167: 235-243. doi:10.1016/j.procs.2020.03.216.

PROJECTS

StockMate
Python, Tensorflow, Reinforcement Learning, AI

- A python framework for making stock price predictors and automated trading agents
- Implemented several ANN based regressors and various RL algorithms
- Built a web UI for viewing agent decisions / stock predictions
- Built a chatbot to let the user know of any job updates / agent decisions

BlindVision
Python, Tensorflow, Deep Learning, Raspberry Pi

- Developed a system that helps the navigation of visually impaired people
- Using Computer Vision and Deep Learning, a 3D audio signal is created to help give an intuitive sense of direction
- The methodology was formalized and the findings were published in the Procedia Computer Science Journal

AInstein
Python, Tensorflow, NLP, ANN

- Developed a virtual assistant for university students
- This assistant can give information about events, faculty such as publications, research interests, projects etc,.

- Implemented a speech to text interface to make it more similar to mainstream virtual assistants
- Built in such a way that new actions and behaviors can be programmed in easily

AnokhaBot
Python, Tensorflow, NLP, ANN
- Built a chatbot for our University's official tech fest (Anokha)
- Users interact with the chatbot to find out about events, timings, contact information, etc,.
- The chatbot was deployed on Anokha's main website and as a Telegram chatbot
- This chatbot was used by hundreds of people during the event

mAIncraft
Python, Tensorflow, Neural Networks
- Developed an autonomous agent that learned (partially) to play the game Minecraft
- Using a CNN model, the agent learnt how to map environments to key presses
- The agent was taught how to avoid obstacles from previous game footage

EXTRA CURRICULAR

Organizer of t{know} Club
Amrita School of Engineering *2016 to 2018*
- Organized and conducted multiple events such as coding competitions, hackathons etc,.
- Conducted seminars on various topics such as building chatbots, web-scraping etc,.

Office Bearer of ASCII Club
Amrita School of Engineering *2017*
- Helped organize and conduct events for our official coding club

ACCOLADES

- **Best Outgoing Student**, Suguna PIP School
- **Adarsh Vidyarthi** (Given to class toppers), Suguna PIP School