Anshul Mathew

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EDUCATION

Bachelor of Technology in Computer Science and Engineering
Vellore Institute of Technology University
July 2015 – April 2019
Overall GPA: **8.6**

SKILLS

Programming Languages
Python, TypeScript, HTML, CSS, Core Java

Reporting & Visualization
HighCharts, Matplotlib, Seaborn , Gazebo, RVIZ

Databases
Postgres, MySQL

Frameworks & Libraries
Angular 9, Bootstrap 3, Karma, Jasmine, ROS Kinetic, DjangoREST, Pandas, Numpy, Sci-Kit Learn

Tools
Git, VS code, Jupyter Notebook, Pycharm, Notepad++

LEADERSHIP

Lead coordinator for NGO Ed-for-All
Responsible for overseeing and delegating work to volunteers teaching English to underprivileged children

Treasurer at VIT ORA Toastmasters
Responsible for managing the overall budgeting and expenditures of the clubs operations

Shaper at Global Shapers Kochi (India)
Responsible for co-ordinating efforts for outreach with hub member to teach communicative English to underprivileged sections of society in partnership with Sukha education Foundation

PROJECTS

Football Booking Website

- Implemented a football booking Website Using Angular 9 for the front end where users can view the available Arenas and its corresponding pitches
- Owners can sign-up arenas using **template-driven forms** to be listed on the UI
- In terms of the Backend **DjangoREST** framework was used to create the various endpoints
- Django's powerful ORM was used atop a sqlite database

Doom Playing AI

- Implemented a Doom Game playing AI using Asynchronous n step learning.
- Using a Convolution neural Network With 3 convolution layers and 2 fully connected layers the AI perceives the environment (VizDoom Platform) in which the agent is operating and extract relevant features.
- Based on these inputs a Q value is generated for each action.
- A soft max function finally is used to decide which action to take and effects the change to the doomguy.
- Setting the appropriate parameter of the SoftMax function, we can tune the AI to either exploit encountered facts about the environment or explore new unseen territory.

PUBLICATIONS

- 'Personal Assistant for social Media' published in Soft Computing for Problem Solving,SocProS 2018, Volume 2

EXPERIENCE

UST Kochi, Kerala Feb 2020 - Present
Associate Software Engineer

- Responsible for **creating, testing and deploying** various UI elements as part of a dashboard for a leading credit scoring company based out of the US using **Angular 9**.
- Improved application performance by reducing the number of API calls using **Observables(RxJs)** when loading child UI elements on the webpage thereby reducing the load time
- Enhanced the **look and feel** of the internal dashboard for viewing user issue categorization using **Highcharts.Js** by incorporating interactive donut charts, bar charts , line charts and other graphs.
- Created **dynamic components** by hooking into the various **life cycle hooks** like the ng-Onchanges lifecycle hook.
- Developed unit test cases for an internal dashboard tool by integrating tools like **Karma** and **Jasmine**, thereby increasing code coverage in **SonarQube** on the CI/CD pipeline.

ASIMOV ROBOTICS Kochi, Kerala Jan 2019 – Nov 2019
Software Engineer & Intern

- Responsible for implementing the ROS Kinetic framework to enable a robotic mobile base to optimize and perform autonomous navigation simulations with RVIZ and Gazebo.
- Implemented a UI to control a mobile base from the browser using **roslibjs** thus providing a more user-friendly interface.
- Wrote Scalable code using Raspberry Pi ,SSC 32 motor controller and arduino Mega for an animatronic head named Vyom mitra that can perform basic speech synthesis to synthesise various expressions for clients like the **Indian Space Research Organization** (ISRO).

Tata Consultancy Services Kochi, Kerala May 2017 – Jun 2017

NLP (Natural Language Processing) May 2018 – Jun 2018

Software Engineering Intern

- Explored and implemented various machine learning models and algorithms such as logistic regression, Linear regression, and support vector Machines to understand the most optimal algorithm for sentiment analysis on a dataset of tweets.
- Worked on a document querying and classification system by using Doc2vec and GloVe word embedding models to classify a dataset of user manual documents.