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Tempe AZ 85281

HARSHA VAMSI KALLURI

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EMPLOYMENT

Graduate Research Assistant **Arizona State University** **Spring 2021 – Present**

- Built household energy consumption models with Vehicle Fleet data for the School of Sustainable Engineering
- Worked with Maricopa Association of Governments to reduce spatial data querying time by 80% on 80TB of traffic data across Interstates using CUDA enhanced Dataframes
- Implemented python toolkit to extract data from Maricopa County's energy dataset and built visualizations

Cloud Engineer **GE Appliances, India** **June 2018 – December 2020**

- Created property management dashboard for hotels to monitor appliance fleet over websockets with ReactJS
- Contributed to the migration of 500,000 appliances from XMPP over to MQTT. Wrote Java adapter APIs to sync with AWS resources and improved connection rate failures to less than 1%
- Implemented device level APIs to integrate appliance voice features with Google and Alexa skills
- Helped optimize appliance firmware updates and integrated seamless OTA update services

EDUCATION

Tempe, AZ **Arizona State University** **Spring 2021 – Present**

- M.S. in Computer Science. **GPA: 4.0/4.0**
- Graduate Coursework: Algorithms; Data Processing at Scale; Mobile Computing; Database design; Data Visualization; Planning and Learning in AI.

Bangalore, India **PES Institute of Technology** **Fall 2014 – Spring 2018**

- B.E. in Computer Science. **Grade: 70/100**
- Undergraduate Coursework: Operating Systems; Databases; Algorithms; Programming Languages; Comp. Architecture; Pattern Recognition; Computer Networks; Compilers; Computational Theory.

RESEARCH

Gouri Ginde, Snehanshu Saha, Archana Mathur, Harsha Vamsi, Sudeepa Roy Dey, Swati Sampatrao Gambhire. **Use of NoSQL Database and Visualization Techniques to Analyze Massive Scholarly Article Data from Journals**. *doi: 10.5530/jscires.7.2.17*

TECHNICAL EXPERIENCE

- **Multi-Agent Re-inforcement Learning with OpenAI Gym** (2021). Designed and tested a multi-agent RL experiment using an OpenAI simulator. Derived a novel approach to handling shared rewards in a multi-agent setting using Twin Delayed Policy Gradient. **Python, TensorFlow, OpenAI Gym**
- **Agricultural Crop Price Prediction** (2018). Used historical price data scraped from the Indian agricultural market database to identify trends. Predicted and visualized 10 different crop prices across all 28 states in India. Won the best undergraduate project award. **Python, D3JS, Keras, TensorFlow**
- **SciBase** (2017). Contributed to an Open Peer Review System for the research community to engage in positive discussion and critique existing work in the scientific domain. **ReactJS, ExpressJS, MongoDB**
- **Interests** (2016). Built a web app to connect users with similar programming interests in a real time chat room using natural language processing. **Heroku, Websockets, ReactJS, MongoDB**

ADDITIONAL EXPERIENCE AND AWARDS

Awarded Best Student Volunteer, 2017 – IEEE Computer Society, Bangalore chapter
Elected Vice Chairman – IEEE Computer Society, PES Institute of Technology

LANGUAGES AND TECHNOLOGIES

Languages and Frameworks: Python, JavaScript, Java, C++; ReactJS, Flutter, Django, Spring, NodeJS, ExpressJS, MySQL, MongoDB, TensorFlow, Pandas, Keras
Tools: AWS, Firebase, Heroku, Git, Redis, Docker, Kubernetes, ElasticSearch