JIGNESH MODI

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EDUCATION:

University of Southern California, Viterbi School of Engineering   January 2019 – December 2020
Master of Science, Computer Science   **GPA: 3.72/4**
Coursework: Web Technologies, Analysis of Algorithm, Foundation of Artificial Intelligence, Machine Learning, Operating System, Database Management Systems

National Institute of Technology, Bhopal, India   June 2012 – May 2016
Bachelor of Technology, Electronics and Communication Engineering   **GPA: 8.3/10**

SKILLS:

Programming Languages: Java, Python, NodeJs, C, C++, JavaScript
Web Technologies: HTML5, CSS3, Sass, React, Angular, Restful API, Redis, Socket.io, Webpack
Database and Others: MongoDB, MySQL, Git, AWS, Heroku, Docker, Nginx

PUBLICATIONS:

Fair Contextual Multi-Armed Bandits: Theory and Experiments, AAMAS, 2020
When an AI system interacts with multiple users, it frequently needs to make allocation decisions. For instance, a virtual agent decides whom to pay attention to in a group setting, or a factory robot selects a worker to deliver a part. The proposed algorithm uses contextual information about the users and the task and makes no assumptions on how the losses capturing the performance of different users are generated.

Reinforcement Learning with Fairness Constraints for Resource Distribution in Human-Robot Teams HRI, 2020
We introduce a multi-armed bandit algorithm with fairness constraints, where a robot distributes resources to human teammates of different skill levels. In this problem, the robot does not know the skill level of each human teammate but learns it by observing their performance over time.

WORK EXPERIENCE:

Amazon Web Services, SDE Intern   May 2020 – August 2020
- Developed and unit tested a python service to collect real-time parameters from AWS core backbone network it serves up to 20% of global internet traffic.
- Traversed network graph topology, calculating available bandwidths, and link failure probability to generate analytical dashboard and provide insights in terms of network resource planning.
- Created a global network visualization for all nodes and links in network graph to simplify process of accessing network resource data.

Tammira. Inc, Software Engineer   January 2020 – May 2020
- Built backend services for user authentication, verification, home page feed, using Nodejs and MongoDB for a community platform to serve people working in personalization industry.
- Implemented Load balancing and Redis caching improves service performance and brings down response time under 200ms.

Goodera, Software Engineer   May 2018 – December 2018
- Led a team of five members to design and build a microservice framework to automate process of developing analytics dashboards. Deployed scalable restful nodeJS API's based web services to serve traffic of 100,000 requests daily, reducing dashboard's development time by 50% and response time by 25%.
- Devised a reusable and customizable React chart component library and data pipeline for seamless dashboard integration with backend service**.**
- Designed a logging and fault reporting emailer system for services to increase reliability and achieve 99% uptime.

PROJECTS:

Weenix Kernel: Restructured an operating system similar to Linux, project involved implementing life cycle of a kernel threads, process management system, virtual memory management system and integrating virtual file system for Weenix operating system

Min Go: Formulated a Q-learning and minimax based AI agent to solve a 5X5 Go board with a limit on each move to take less than 30 seconds. AI agent stands out to be in top 20 in competition with more than 400 such AI agents.