Madhu Shreepathihalli Shivakumar
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SUMMARY: Experienced software engineer focused on with over 3 years of experience in Software Development Life Cycle for organizations. With a strong background in Python, Robotics, AI, and systems design, I help companies drive innovation, reduce costs, and build engagement.

SKILLS

- Modeling / Control of Robots
- Artificial Intelligence
- Perception in Robotics
- Statistical Machine Learning
- Data Visualization
- Linear Algebra
- pyspark
- Lucid Chart
- Databricks
- AWS
- Python
- C
- SQL
- Jira
- Big Data Technologies
- Machine Learning
- Data Structures
- GitHub

EXPERIENCE

Acorns | Irvine, CA **05/2022 - Present**
Data Engineer

- Constructed intricate data pipelines and tools to ensure the seamless flow and integration of critical data.
- Conducted cost log analysis to identify and address inefficiencies, resulting in a Databricks cost savings of $400k+ annually.
- Implemented Immuta tool for user self-service access, reducing daily direct requests by 40%.
- Optimized user recommendations, reducing job runtime from 3 hours to 15 minutes and saving $110k+ annually.

Hewlett Packard Enterprise | Bangalore, India **01/2019 - 12/2020**
Systems / Software Engineer

- Built an end-to-end command-line interface for seamless protocol management to advance Outbound Route Filtering (ORF)
- Developed tools for the GNU Project Debugger, that enable visualization and analysis and reduced debugging time by 50%.
- Designed a monitoring tool that automated daily health reports, resulting in a 20% improvement in build quality assessment, a 30% reduction in critical build errors, and an average time savings of 2 hours per day.

PROJECTS

Arizona State University | Tempe, AZ **2021–2022**
Projects On Artificial Intelligence

- Applied Model Based Reinforcement Learning (MB-RL) to optimize gait parameters of a sidewinding snake robot, utilizing a combination of robotics and advanced machine learning techniques.
- Created a 3D human reconstruction system through pose estimation, coupled with the design and implementation of an AI-powered gym trainer that delivered customized workout instructions based on exercise-specific heuristics.
- Built and trained a bot crawler to pull itself forward using reinforcement learning.
- Implemented uninformed search algorithms BFS, DFS, UCS and informed search algorithm, such as A* that trained a Pacman environment to find the optimal paths to food.
- Implemented a Naive Bayes Model to predict stock trends based on the weather data, sourcing information from 10 years of data and testing it on 1 year of data to get over 60% accuracy in our predictions.

EDUCATION

Arizona State University | Tempe, Arizona
Masters in Robotics and Autonomous Systems (AI)

PES University | India
B.Tech in Computer Science and Engineering Bangalore

CERTIFICATIONS

Coursera

- Data, Data Everywhere
- Deep Neural Networks
- Machine Learning Projects
- Neural Networks / Deep Learning
- Data Visualization
- AWS serverless