

# MADHU SHREEPATHIHALLI SHIVAKUMAR

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## Breif Summary

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I'm an experienced software developer with over 3 years of expertise in the Software Development Life Cycle using Jira, I hold a Bachelor's degree in Computer Science and a Master's degree in Robotics with a primary focus on Artificial Intelligence. My proficiency in Python spans over six years, and I bring strong skills in system design, adherence to coding standards, and effective source control management. I am enthusiastic about making meaningful contributions to drive innovation and achieve excellence.

## PROFESSIONAL EXPERIENCE

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**Acorns | Data Engineer | Irvine, California**

**05 2022 – current**

- Constructing and managing intricate data pipelines and tools to ensure seamless flow and integration of critical data within the organization.
- Databricks Cost Savings** Achieved close to \$400k annual cost savings through cost log analysis and identifying opportunities to save on job compute.
- Immuta Tool Implementation** Implemented Immuta tool for user self-service access, reducing daily requests by 40%.
- Learnhub Optimization** Optimized user recommendations and reduced job runtime from 3 hours to 15 minutes, saving \$110k annually.
- Hackathon** worked in a team of 4 and we won the 2023 onsite hackathon by developing a Slack bot within 8 hours that leveraged the synergy of ChatGPT, REST APIs, and Flask to provide invaluable support to cross-functional teams with their data engineering inquiries.

**Hewlett Packard Enterprise | Systems/Software Engineer | Bangalore, India**

**01 2019 – 12 2020**

- Integral member of the Aruba team, actively contributing to the advancement of networking protocols encompassing Outbound Route Filtering (ORF) primarily in C, coupled with the formulation of comprehensive end-to-end command-line interfaces for seamless protocol management.
- Designed and developed a powerful utility, utilizing the GNU Project Debugger, that enabled the visualization and analysis of complex data structures within core dumps, resulting in a 50% reduction in debugging time and a 25% increase in overall productivity.
- Designed and developed a sophisticated 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. This contributed to a 15% reduction in post-release bug-fixing costs.

## PROJECTS

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- Goal Keeper Robot:** Led a team of 5 to conceptualize and develop an autonomous robot capable of tracking the ball and autonomously defending a goal with close to 80% accuracy. achieved through a blend of Arduino and Raspberry Pi technologies.
- Snake Robot:** Applied Model-Based Reinforcement Learning (MB-RL) to optimize gait parameters of a sidewinding snake robot, showcasing a combination of robotics knowledge and advanced machine learning techniques.
- Gym Assistant** Led a team of 4 to create a 3D human reconstruction system through pose estimation in Python, coupling it with an AI-powered gym trainer capable of delivering customized workout instructions based on exercise-specific heuristics.
- Practical Search Algorithms:** Implemented uninformed search algorithms BFS, DFS, UCS and Informed search Algorithms such as A\* in a Pacman environment to find the optimal paths.
- Stock Trend Predictor:** Led a team of 5 to Implement a Naive Bayes Model to predict stock trends based on the weather data, we trained the model over 10 years of data and tested it on 1-year data and got over 60% accuracy.

## TECHNICAL SKILLS

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**Languages:** Python, C, SQL

**Developer Tools:** VS Code, lucid Chart, Dia tool, Arduino IDE, Databricks, AWS, SPARK, Airflow, Pandas

**Technologies/Frameworks:** Linux, GitHub, Gerrit, Raspbian, confluence, jira

## EDUCATION

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**Arizona State University**

*Masters in Computer Science*

*Tempe, Arizona*

**PES University**

*B.Tech in Computer Science and Engineering*

*Bangalore, India*