

Keerthana Sri Muthuraman

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SUMMARY

Passionate Computer Science junior with strong expertise in Software Engineering, Software Development, AI/ML, Data Science, and Embedded Systems, proficient in programming languages like C++, Java, Python, and C. Skilled in Data Structures and Algorithms, Firmware Development for Embedded Platforms, SDLC, Data Analysis, Data Engineering, and Cloud Technologies. Seeking opportunities to deliver scalable solutions in collaborative environments.

EDUCATION

BS Computer Science & Minor in Data Science – Junior, Arizona State University **Expected May 2026**

Achievements: Dean's List for Spring '23, Fall '23 & Spring '24, NAmU, NSLS Scholar. **Cumulative GPA : 3.59 / 4.0**

Courses: OOP, Data Ethics, Digital Design Fundamentals, Calculus for Engineers, Discrete Math Structures, Computing Ethics, Data Structures and Algorithms, Information Assurance, Exploring data in R and Python, Probability and Statistics, Applied Linear Algebra, HCI, Assembly Language Programming, Theoretical Computer Science

Certifications: Data Science and Machine Learning Internship Program – Edureka, Mobile App Development - Android App Development for Beginners - Simplilearn (Skillup) & The Complete Quantum Computing Course – Udemy (In-Progress)

TECHNICAL SKILLS

- **Programming Languages & Scripting Language:** Java, C#, C, C++, Python, Ruby, Swift, Perl, Bash, Go, Kotlin
- **Verification & Design Tools:** SystemVerilog, UVM, Verilog, ModelSim, Digital Logic Design Tools
- **Data Analysis & Machine Learning:** NumPy, Pandas, Tableau, MATLAB, RStudio, Qiskit
- **Web Development:** HTML, CSS, JavaScript, PHP, Vue.js, React.js, Angular, Node.js
- **Databases:** MySQL, PostgreSQL, MongoDB, SQLite, Oracle
- **Tools:** Git, GitHub, GitLab, MS Office, Power BI

EXPERIENCE

Student Researcher at Rolston Lab, ASU **July 2024 - Present**

- Developing and implementing machine learning algorithms to optimize battery testing processes.
- Collaborating with a versatile software team to integrate Machine Learning solutions, enhancing the efficiency and accuracy of data analysis.

Headstarter - 7-week SWE Fellowship **July 2024 – September 2024**

- Created a user-friendly interface, pantry tracker with real-time inventory updates for effective kitchen management.
- Curated a comprehensive personal portfolio website to showcase web development skills and projects.

PROJECTS

Movie Recommendation System | Pandas, Seaborn, Matplotlib, Scikit-learn, ipywidgets **January 2024 - June 2024**

- Developed a Movie Recommender System using popularity-based, content-based, and collaborative filtering models, enhancing user experience by providing personalized movie suggestions.
- Performed Exploratory Data Analysis on the dataset to identify key insights and implemented recommendation modules.

Stock Market Analysis Using Python | Pandas, Seaborn, Matplotlib **January 2024 - June 2024**

- Performed stock data analysis to track price changes, trading volumes, and moving averages for tech companies.
- Analyzed stock trends and risk, calculating daily returns and correlations, and visualized trends using pie charts and plots.

Consumer Complaint Resolution Analysis | Pandas, Seaborn, Matplotlib, Sklearn, PCA **January 2024 - June 2024**

- Developed a consumer complaint classification model, improving dispute resolution accuracy.
- Performed data cleaning, feature engineering, and model optimization.

Twitter Sentimental Analysis | Pandas, Seaborn, Matplotlib, NLTK, Tensorflow, Sklearn **January 2024 - June 2024**

- Designed and implemented a sentiment analysis model to classify Twitter data into Positive, Negative, and Neutral categories, using NLP techniques to clean and prepare the text for model training.
- Developed an LSTM-based deep learning model for sentiment prediction, focusing on efficient text preprocessing, feature extraction, and performance evaluation through classification reports and accuracy metrics.

Synchronous Sequential Machine-Capstone | Verilog, Digital Logic Design Tools **November 2023 - December 2023**

- Designed a custom microprocessor focusing on high-performance sequential operations.
- Implemented Finite State Machines by translating State Diagrams and Transition Tables into Verilog code.

Automated Car Implementation | MATLAB, BrickLink, RoboSIM **October 2022 - December 2022**

- Developed an automated car system tailored for elderly and handicapped individuals using simulation and design tools.
- Designed the car's features and tested its functionality, ensuring practical feasibility.

EXTRA CURRICULAR ACTIVITIES

Grace Hopper Celebration & WE 2024, Attendee	October 2024
Society of Women Engineers at ASU, Club Member	July 2024 – Present
Women in Computer Science, Club Member	May 2024 – Present