Apoorva Machale
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WORK EXPERIENCE

Software Engineer | *Technology Stack: Ruby, Ruby on Rails, MySQL, Redis*   **Aug 2020 – July 2022**
UST, India

- Enhanced web application APIs with Highcharts, making analytics charts **35% more readable** for AES Corporation.
- Boosted engagement by 20% through visually compelling bar charts presenting key metrics with clear data formatting, including converting large numbers for improved readability.
- Enabled the visualization of previously unreadable binary data through an efficient binary-to-UTF-8 conversion solution using Ruby on Rails and Prawn, resulting in a **40% processing time** reduction.
- Elevated unit testing coverage for the credit-debit feature module from **85% to 90% using RSpec**, ensuring top-notch software quality.
- Engineered and deployed a dynamic skill matrix website using ReactJS and Firebase, empowering **200 employees** to track and self-report their skills, leading to a 20% increase in workforce efficiency.
- Improved visibility by utilizing an AWS S3 bucket to store automation reports and displayed them as charts, earning recognition for innovative design at an internal hackathon.

Graduate Student Assistant   **June 2023 - May 2024**
[CSUF NAARE](#) *(Neurocognitive Aging and Analytics Research Education*)

- Facilitated collection of national and global research data ([NACC](#), [GAAIN](#), [TARCC](#)) for brain aging analysis projects.
- Collaborated with professors to craft a compelling [poster presentation](#) on diabetes and hypertension correlation with Hispanic mild cognitive impairment for [AAIC San Diego](#), based on NACC data.

PROJECTS

[Daily Journaling Application](#) | *Technology Stack: FastAPI, Python, SQL, React*   **Jan 2024 - May 2024**

- Designed user-centric features to enhance self-awareness by data visualization that provides user mood trends over time.
- Analyzed user blogs with [Google Sentiment API](#) to identify sentiment score, magnitude, and text categories.
- Integrated [OpenAI API](#) to generate personalized suggestions based on user blogs for mood improvement or goal guidance.

[Skill Matrix Application](#) | *Technology Stack: HTML, CSS, React, Material UI*   **Sep 2020 - Jan 2021**

- Implemented an employee application for 150+ individuals, enabling efficient searching using Firebase Cloud Storage.
- Created interactive PDF reports with filtering and sorting capabilities by user, email, or skills.
- Optimized user experience by seamlessly deploying the application on Firebase Hosting and constant availability.

[Stress Detection Analysis from social media](#) | *Technology Stack: Python, Tkinter*   **Jul 2019 - Apr 2022**

- Achieved high [F1-scores](#) using AI models **(0.83 for SVM, 0.80 for Naive Bayes, and 0.72 for LSTM)** for my tweet sentiment models in stress detection, demonstrating their effectiveness in identifying stressful tweets based on [published research](#).
- Mastered data analysis by pre-processing Kaggle datasets, enabling high accuracy with high F1-scores across all models.
- Implemented a unique hashtag-based sorting system that overcame the limitations of traditional sentiment analysis; this machine learning-based approach efficiently identified high (>70%) and low (<10%) stress users.

PUBLICATIONS

- "Text Based Stress Detection Techniques Analysis using social media," IEEE, September 2019 | [Link here](#)

TECHNICAL SKILLS

- **Languages and Technologies:**   C, C++, Python, Ruby, Java, HTML, CSS, JavaScript, Firebase, Heroku, Linux, RESTful API
- **Libraries and Frameworks:**   Ruby on Rails, Bootstrap, Material UI, Flask, React.js, Node.js, FastAPI
- **Tools:**   GitHub, Jenkins, Postman, Git, Docker, PyCharm, Visual Studio, Android Studio
- **Databases:**   MySQL, MongoDB, Redis, SQL

EDUCATION

California State University, Fullerton   **Aug 2022 - May 2024**
Master of Science, Computer Science   **GPA:** 3.6/4.0
Savitribai Phule Pune University   **Aug 2016 - May 2020**
Bachelor of Engineering, Information Technology   **GPA:** 9.0/10.0

Leadership / Extracurricular

- Participated in the [TreeHacks Hackathon 2023](#) at **Stanford University, CA** (February 2023)
- **Student Assistant** for Undergraduate Research Opportunity Center ([UROC](#)) at CSUF (November 2022 – May 2023)