TARAVAT SHARAFAT

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Portfolio: https://taravatsh.github.io/Portfolio/

SUMMARY

A determined Software Engineer, Data Analysts and Data Scientist, skilled in Typescript, JavaScript, React.js, Node.js, VBA, Python, Pandas, machine learning, SQLAlchemy, HTML, CSS, Tableau as well as SQL and NoSQL (PostgreSQL, MongoDB) databases. Highly skilled as an Aeronautical Engineer in development, research, analyzing and solving engineering problems both theoretically and through engineering tools and IT software. Have recently completed a project in a team of 17 engineers by implementing new features for the OPS tooling portal in preparation of the company's commercial launch with the knowledge of Typescript, Node.js and React. As the POC of this project I was also in charge of leading a group of senior engineers and ensuring the project was on track for successfully meeting the company goals. I have also led a core team of five where successful construction and operation of a radio-controlled solar power aircraft was achieved while pursing my undergraduate degree in aeronautical engineering. Excel in leading teams and collaborating with a diverse group of individuals. Looking forward to implementing my innovative and strategic thinking abilities in more exciting and challenging projects.

TECHNICAL SKILLS

Languages: JavaScript, TypeScript, Python, R

Applications: MongoDB, PostgreSQL, GitHub, Flask, Tableau

Data Manipulation and Visualization: Pandas, Matplotlib, Leaflet.js, D3.js, BeautifulSoup, GeoJSON, Scikit learn, Tensorflow, Jupyter Notebook, Google Colaboratory, Machine Learning

Engineering Tools: ANSYS, MATLAB, AutoCAD, SolidWorks

IT Software: Microsoft Word, Microsoft Excel, Microsoft PowerPoint, Jira, Linear

DATA ANALYTICS PROJECTS

California Wildfires |Link to Github [https://github.com/dhivyapadmanaban/California_Wildfires]

Led a core team of five on creating an interactive dashboard for exploring the dataset of California Wildfires by creating visuals that helped in telling the data story as well as building a machine learning model for predicting the severity of the wildfire in the upcoming years.

- Role: Cleaned and prepared the dataset for completing the initial analysis using Python libraries. Used PostgreSQL for storing the cleaned data and helped with creating a machine learning model for making predictions. Created a dashboard for presenting results of analysis using Tableau.
- Worked on this project and completed all the requirements 100% remotely in a 3 week period by constantly collaborating with team members through Zoom and Slack.
- Presented the project to the class by showcasing the results through an interactive dashboard.
- Tools: Python, PostgreSQL, Tableau.

Belly Button Biodiversity |Link to Github [https://taravatsh.github.io/Belly-Button-Biodiversity/]

This project showcased creating a website with an interactive dashboard to explore and analyze the dataset of bacterial species living on individuals' belly buttons.

- Role: Build the dashboard of the website by creating engaging and dynamic charts that display the bacterial data for each volunteer by simply allowing the participants to select their ID numbers to be able to view the data.
- Documented the project on a Github repository by deploying the dashboard to Github pages.
- Tools: JavaScript, Plotly, D3.js, CSS, HTML.

ENGINEERING PROJECT

Design, Construction and Operation of a Long-range Solar Powered aircraft
| Link to Project [https://drive.google.com/file/d/1BxIST5WyJGdCBzlhk2hZN2l4cLzcSpnD/]

Led a core team of 5 on the design, analysis, construction and operation of a solar powered radio-controlled aircraft by harvesting the sun's energy through photovoltaic cells placed on aircraft wings to absorb the sun rays and convert the energy into electrical current.

- Role: Visualized the flow fields and determined the aerodynamic properties of the aircraft and analyzed the structural integrity of the entire aircraft model.
- Tools: ANSYS, SolidWorks, MATLAB.

EXPERIENCE

Joby Aviation **01/2022 - Present**
Software Engineer San Carlos, CA
Focusing on building operational tooling portal for supporting Joby's commercial launch.

- Have built in-house reusable UI components library and hosted it on storybook. Allowing product managers and designers to interact with it.
- Have built Flight Information Display to allow android/web users to book, cancel and modify flight itineraries.
- Have built additional features for the OPS tooling portal to support the commercial launch. As the POC of this project I have led the team and kept the project on track for meeting company's milestones in 2023.
- Have built notifications center UI along with push notifications.
- Have built the streaming server using Node.js and hooked up the frontend to receive real-time updates using graphql subscriptions.

UC Berkeley **10/2021 – 04/2022**
Software Engineering and Data Science Teaching Assistant Berkeley, CA

- Attended live classes to support 60 students with concepts like data exploration, analysis, cleaning across a variety of modalities including scripting, distributed computing, and production use cases.
- Held weekly office hours with students to review program modules, clarifying general questions, and assisting the students with software engineering and data science challenges covering the topics on JavaScript, React, supervised machine learning methods, Python, SQL, and R.

Tesla **10/2020 - 05/2021**

Production Associate Fremont, CA

- Assembled the door components of Tesla Model 3 vehicles in a team of ten with two individuals in each station working on front and rear doors and hitting the production target of assembling about 300 doors per shift.
- Ensured that the components were assembled correctly in previous stations through testing devices.
- Successfully performed a detailed quality check as a detailed-oriented individual ensuring the assembled components were free from any defects before passing them to the robots and the quality control station.

Emirates Engineering **06/2018 - 07/2018**

Trainee Dubai, UAE

- Performed automatic eddy current testing for inspecting the aircraft wheels and brakes of both Boeing and Airbus series in the wheels and brakes workshop in a team of ten.
- Successfully tested, repaired and overhauled the aircraft engines in the engine workshop in a team of five.
- Effectively improved the appearance and functionality of all the interior soft furnishings, seats and safety equipment of the Emirates fleet by almost 90%.

EDUCATION

Certificate of Data Analytics and Data Science: University of California Berkeley Extension, Berkeley, CA

A 24-week intensive program focused on gaining technical programming skills in Excel, VBA, Python, R, JavaScript, SQL Databases, Tableau, Big Data, and Machine Learning.

Bachelor of Science in Aeronautical Engineering: Coventry University, UK

A dual award four year degree with Emirates Aviation University, UAE, designed in line with international quality standards. It covers the four classical areas of aerospace vehicle design, aerodynamics, structures, propulsion, flight stability and control.