Sunami Dasgupta

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EDUCATION

California State University - Chico **2025**
Bachelor of Science, Computer Science *Chico, California*

Data Structures & Algorithms, Statistics & Probability, Linear Algebra & Calculus III, ACM - **GPA - 4.0 / 4.0**

EXPERIENCE

Lawrence Berkeley National Labs, U.S. Department of Energy **05-2023 - 08-2023**
Software Engineering Intern *Berkeley, CA*

- Implemented **Docker containerization** for SENSE applications, **enhancing** application **isolation** and **reducing** deployment **inconsistencies by 80%**.
- Orchestrated **multi-container deployments** using **Kubernetes**, increasing application availability and **system reliability**, leading to a **40% decrease in system downtime**.
- Integrated data modeling with **Prometheus** for real-time monitoring and alerting of the network services, **improving incident detection speed by 60%.**

California State University, Chico **08-2022 - 05-2023**
Teaching & Lab Assistant *Chico, CA*

- Assisted **50+ students** in understanding complex **CS concepts** by developing individualized study plans and resources, boosting comprehension by 15%.
- Provided support to over **100 students** in **troubleshooting installation**, use of **Linux & SSH** connections to **access ecc-linux machines** & configuring environment variables within **the .zsh & bash source file.**

Multiprocessing Muggles **05-2022 - 07-2022**
Software Engineering Intern *Remote*

- Developed a **MEAN**(MongoDB, ExpressJS, Angular, Node) based video calling web application to support 10k+ users while maintaining **93% uptime.**
- Utilized **Formly, Jest, & NPM** for the tool's frontend & explored **Java Spring Boot** for the tool's backend.
- Collaborated with design team on **UX/UI** improvements with **Tailwind CSS** and **Bootstrap** which resulted in an increase of **user engagement by 20%.**

PROJECTS & RESEARCH

Spottr: Parking Lot Detection | **Stanford University Hackathon** **02 / 2023**

- Contributed to **promoting sustainable transportation** practices by providing a **convenient and efficient solution** to a common problem faced by users and **reducing the time wasted** on circling parking lots.
- Developed a **python** app that utilizes advanced image processing techniques, such as **adaptive thresholding, Gaussian blur, and dilation**, to accurately detect parking spot occupancy in real-time.
- Runner-up, "**Best Sustainability Project 2023**" - out of 1700+ hackers.

Detecting Breast Cancer with Logistic Regression | **Python, Seaborn, Machine Learning**

- **Pre-processed** and cleaned dataset with **Pandas and NumPy**, **enhancing** prediction **accuracy**.
- Utilized **Matplotlib** and **Scikit-learn** for data visualization and analysis. Conducted feature selection using **Correlation Matrix, SelectKBest, and Recursive Feature Elimination**
- Evaluated model accuracy using metrics such as **confusion matrix, precision, recall, and F1 score**; **achieved 96% accuracy.**
- Research **published in International Journal of Advances in Engineering and Management.**

SKILLS & HONORS

Languages: C, C++, Python, Java, HTML5 / CSS, JavaScript, PHP, TypeScript, Bash Shell Scripting, MySQL.
Technologies/Web Frameworks: React, Node, Mongo, ExpressJS, Tailwind CSS, jQuery, Bootstrap , REST API, Mongoose, Linux/Unix, Docker, Kubernetes, Prometheus, Grafana, SQLite

1. **Google Code Jam 2022, Rank: 607 out of 45,000.**
2. **CodeChef Global Coder 2021, Rank: 9 out of 60,000+.**
3. **Chico State Excellence Scholarship 2022 & 2023, 1 out 1,500+.**
4. **Linux Foundation Scholar 2022, awarded for most number of Open-Source contribution.**