Somasree Majumder

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Work Experience

Software Engineer | Deloitte (Full Stack with Backend Heavy)   **July 2023 − Present**
Tech Stack: Node.js, JavaScript,AWS, Kubernetes, Redis, Python

- Developed full-stack applications using **Node.js, JavaScript**, created REST APIs, and deployed on AWS
- Built secure authentication using **JWT**, configured middleware for logging and error handling
- Developed webhooks for chatbots using **Python SDK**, implemented Business Entity Recognition
- Managed 6 large custom UI applications with focus on security best practices and data integrity

Machine Learning Developer | Unify.ai (Freelance)   **Feb 2023 − May 2023**
Tech Stack: TensorFlow, JAX, NumPy, PyTorch, PaddlePaddle, TensorRT

- Implemented functions in **TensorFlow, JAX, NumPy, Torch, PaddlePaddle**; increased code coverage by 10
- Led unit-testing with **Hypothesis**, managed array-api-test suite achieving 80
- Wrote Ivy OpConverters for **TensorRT** backend, guided contributors through large codebase

Projects

- **Django Food App** *[Django, Python, Bootstrap, JavaScript, PayPal, Razorpay]*
  - Developed a comprehensive multi-vendor food ordering platform with backend and integrated **PayPal** & **Razorpay** payment gateways [Link]
  - Implemented advanced features: asynchronous shopping cart, vendor management system, proximity-based search, and email verification
  - Built robust user/vendor authentication, profile management, and admin control panels with custom validation
  - Integrated Google Maps API for address suggestions, developed tax calculation module, and order management system
- **Write Your own Memcached Server** *[JavaScript, TypeScript]*
  Custom implementation of a Memcached server [Link]
- **Django-Recommendation System** *[Python, Django, SQLite]*
  Movie recommendation website using prediction algorithms [Link]
- **My Vector Database** *[Python, HNSW]* - I propose the development of a lightweight and straightforward vector database implementation utilizing Hierarchical Navigable Small World (HNSW) graphs in Python. This solution will be designed with minimal dependencies, ensuring ease of integration and deployment across various environments. Key Features: Efficient Vector Search: Leveraging HNS [Link]

Certifications

- **Machine Learning** - DeepLearning.AI

Publications & Achievements

- Published papers: **SPECTRUM 2020** (ML in Medicine), **IEMATICS 2020** (Homomorphic Encryption)
- Ranked **18/2500** in HackerEarth ML Challenge, **1.6k** globally in Google Code Jam for Women
- Ranked **12/1000+** in Cipla Data Science Competition
- Open source contributor to PyTorch Lightning, Hugging Face, Transformers, KerasCV, KerasNLP
- LiFT Scholar 2022 (Top 500 worldwide) and GHC OSD'23 Mentor for OpenSSF project

Technical Skills

- **Languages:** Python, JavaScript, TypeScript,HTML,CSS
- **Web Technologies:** Node.js, Django, REST APIs, JWT
- **Cloud & DevOps:** AWS, Docker, Redis
- **Machine Learning:** TensorFlow, PyTorch, JAX, NumPy, PaddlePaddle
- **Databases:** SQL, NoSQL

Education

Bachelor of Technology in ECE (2019-2023) | DGPA: 8.94