ABHIROOP REDDY NAGIREDDYGARI

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EDUCATION

Bowdoin College, Brunswick, ME
GPA: 3.6 / 4.0
Major: Computer Science & Economics **Minor:** Physics May 2025
Relevant Coursework: Financial Machine Learning, AI, Distributed Systems, Software Engineering, Computational Geometry, Algorithms, Systems, Data Structures

RELEVANT WORK EXPERIENCE

Bowdoin College, Brunswick ME September 2023 – Present
AI TA, Distributed Systems TA, Software Engineering TA, Data Structures TA

- Achieved an average increase of 12% in student grades through lessons including, **Git, CI/CD**, **Agile Methodologies,** and **Cloud Computing/ Cloud Architecture**

Costco, Issaquah WA June 2024 – September 2024
Data Engineer Intern – Marketing Technology

- Upgraded the Ad-Hoc operational email task using **Databricks**, **NoSQL**, and **Informatica**, decreasing runtime by 30 minutes per task
- Constructed a weather-based advertising campaign using **Databricks, Informatica,** and **Adobe Experience Platform** to recommend weather related items; campaign deployed in 3 Costco Warehouses

Software Developer Intern – BI & Data Analytics June 2023 – September 2023

- Engineered an Automated Testing System using **Python**, **Selenium**, and **Azure Synapse SQL** to test **Power BI** reports before the warehouses open resulting in 7% fewer error tickets
- Streamlined **Sauce Labs API** usage by identifying systems with the capacity for more parallelization which decreased overall runtime by 90 minutes

Foxtail, Woodinville WA May 2022 – August 2022
Software Developer Intern

- Programmed a data analytics dashboard with **JavaScript**, **HTML/CSS**, **Expo**, and **MongoDB** to help over 25 online sellers track revenue, click-through rate, and product trends
- Incorporated 12 autonomous listing/delisting scripts utilizing **JavaScript**, **Puppeteer**, and **Asynchronous APIs** to optimize inventory management for online store managers

PROJECTS

Honors Project: ML Squash Analysis System

- Developed a squash analysis tool using **YOLO** and **PyTorch**, achieving 95% accuracy in player detection
- Applied a **Hugging Face** model for **Key Point Detection** for a court resulting in 85% accuracy across a video

Better Pokédex

- Deployed a responsive **MERN** stack Pokédex app with real-time data updates using **React** and **Redux**, achieving an average load time of under 2 seconds
- Created a **REST API** using **Node.JS**, **Express.JS**, and **MongoDB**, integrating PokéAPI to handle 1,000 requests per minute
- Enhanced performance through server-side caching with Redis, reducing API load and improving data retrieval times by 18%

Distributed File Sharing System

- Built a 3-tier File Sharing System using **Python**, **Socket Programming**, and **AWS** to synchronize files using 10 regional homogenous machine clusters
- Reduced latency for users up to 67% using ping checks to identify two regions with the lowest latency
- Improved fault tolerance by 74% via file duplication inside clusters and graceful degradation by forwarding faulty calls to a secondary cluster

LEADERSHIP AND ACTIVITIES

Varsity Squash Team, Bowdoin College September 2021 – Present

- Directed practice for 15 athletes across 6 practices each week focusing on teamwork, collaboration, and individual growth

TECHNICAL SKILLS

Frontend: JavaScript (Proficient), TypeScript (Proficient), Angular.JS (Intermediate), React.JS (Basic)
Backend: Python (Proficient), Java (Proficient), C (Basic), C++ (Basic), Node.JS (Proficient), R (Proficent)
Database: SQL, R, MongoDB, Oracle DB, Microsoft SQL Server, MySQL, Postgres, Redis