Shubha Swarnim Singh

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Education

The College of Idaho, Computer Science and Business Administration — August 2022 – May 2026

- Honors Student, Dean's List, Honor's GPA: 3.77/4.0

Experience

Data Analyst Intern, Albertsons Companies — June 2025 – Present

- Built a supervised classification model in R (XGBoost, Random Forest) to predict Butcher Block profitability across 2,200+ Albertsons stores, integrating shrink, Per Week Per Store(PWPS), and regional features.
- Deployed ML-driven profitability pipeline analysis with multiple visualizations, supporting $2 Billion+ in sales decisions and guiding CAPEX planning across Meat & Seafood departments.
- Collaborated with data scientists from Pleasanton, California, to automate store segmentation and breakeven months, informing Butcher Block case length decisions nationwide and cutting manual analysis time by 87.5%.

IT Intern, College of Idaho — Dec 2022 – May 2023

- Deployed Multi-Factor Authentication (MFA) across 1,000+ , achieving 90% success with secure token validation.
- Maintained a 1M+ record species database, writing SQL scripts to ensure data integrity and support faculty research.

Alumni & Events Technician, College of Idaho — Dec 2022 – Present

- Provided technical support at major alumni events, including $1.12M and $1.3M fundraisers across two years.
- Managed and updated the alumni database to support targeted outreach; improved alumni retention by about 20%.

Projects

Senate Voting System — **GitHub**

- Engineered a secure full-stack online voting system using Node.js, Express, SQLite, and WebSockets to digitize Senate voting for a 20-member student body, replacing legacy manual processes.
- Built real-time vote visualizations with <50ms latency using WebSockets and D3.js for instant, transparent updates.
- Added role-based access and authentication, enabling secret ballots and cutting groupthink by over 90%.

In-Memory Search Engine — **GitHub**

- Built a high-performance in-memory file search engine in Python that indexed 3,000 local `.txt` files (approx. 500MB) and returned keyword matches in under 10 milliseconds on average, enabling real-time search.
- Implemented recursive directory crawling and created a word-based inverted index, reducing search time by over 90% compared to linear file scans.

Investment Calculator — **GitHub**

- Built a Python tool leveraging Yahoo Finance data and news sentiment to analyze 2,500+ NASDAQ stocks, achieving 93% accuracy in identifying 10-year uptrend patterns.
- Designed an algorithm to support consistent, data-driven investment decisions.

Leadership

- **ASCI Treasurer (2024/25)** & **Senator (2022-2024)**: Managed $100K budget, ensuring effective fund distribution and financial transparency; previously served as a Senator.
- **Consul, Sigma Chi (2025-Present)**: Led the fraternity, overseeing operations and brother development.
- **Resident Assistant (2022-Present)**: Built inclusive community, resolved conflicts, and mentored peers.
- **President, Boxing Club (2023-Present)**: Restarted and grew the club and built a supportive fitness community.

Technical Skills

Programming & Development: Python, JavaScript, SQL, Node.js, Express, Flask, HTML/CSS, Bootstrap, WebSocket
Data Science & Machine Learning: XGBoost, Random Forest, K-means, SHAP, Scikit-learn, Pandas, NumPy
Tools & Visualization: Power BI, Tableau, OMNI, Excel, Git/GitHub