Shrabya Bhattarai

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EDUCATION

University of Southern Mississippi — Hattiesburg, MS
Bachelor of Science in Computer Engineering — *Aug 2024 – May 2028*

- GPA: 3.91/4.0 | Relevant Coursework: Digital Electronics, Computer Networks, Operating Systems, Embedded Systems, Data Structures

TECHNICAL SKILLS

Languages: Python, C, C++, SQL
Data & Analytics: MySQL, data cleaning, CRM databases, weekly sales reporting
AI & Vision: YOLO, vision-language models, model fine-tuning
Hardware: Arduino, sensors, motor drivers, Mecanum drive
Tools & Frameworks: Flask, Git

EXPERIENCE

4th Dimension Marketing Solutions — Cincinnati, OH
Data Analyst Intern — *May 2026 – Aug 2026*

- Connected daily field sales stats from multiple sales locations to the company's main server.
- Checked raw sales records and fixed errors before they went into the team's reports.
- Wrote weekly sales summaries for the marketing team.
- Collected customer feedback on the products.
- Kept the team's CRM database up to date in MySQL.

TechMatrix — Kathmandu, Nepal
Junior Software Engineer Intern — *May 2023 – Aug 2024*

- Worked on the IoT side of the team's software projects, writing parts of the backend in Python and Flask.
- Collaborated with a small team of engineers on shared projects.

PROJECTS

Wildfire Smoke Detection on Edge Hardware — Python, YOLO, Vision-Language Models
Research Project | University of Southern Mississippi — *Jan 2026 – Present*

- Co-developing a two-stage system: a lightweight image classifier screens every camera frame, and a small vision-language model reviews only the frames it is unsure about.
- Put the paper together, found and reviewed the reference literature, and helped train the models.
- Currently helping debug the models; paper in progress.

Lost: Live Lecture Confusion App — Node.js, SQLite, Claude API, Deepgram
VOXO Hatchathon 2026 | University of Southern Mississippi — *Nov 2026*

- Built a web app where students tap the exact line of a live lecture transcript that lost them, and the professor sees those lines light up in real time.
- Used Deepgram speech-to-text for the live transcript and Claude for explanations and after-class summaries.
- Added student and professor logins, a SQLite database and 28 automated tests, and pitched the app live to the judges.

Can Public Stats Spot a Transfer Flop? — Python, pandas, scikit-learn, LightGBM
Personal Data Project | github.com/source-shrabya/player-value — *Sep 2026 – Nov 2026*

- Built a dataset of 4,782 football transfers; public stats predicted playing time no better than the fee.

Robo Soccer — Autonomous Arduino Robot — Arduino, C++
Finalist | Google Developer Group (GDG) USM Competition — *Oct 2025*

- Designed and built a custom Arduino-powered robot for autonomous soccer play.
- Programmed movement algorithms for ball tracking and precision control.
- Reached the finals among multiple university teams.

ACTIVITIES & LEADERSHIP

USM Open Source Community (OSC) — University of Southern Mississippi
Social Media Lead & Co-Founder — *March 2026 – Present*

- Co-founded the OSC club and manage the @oscusm social media presence, growing the community to 200+ student members through workshops, open-source contribution drives, and event coordination.