

Ayesha Mahmood

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EDUCATION

University of Washington

Bachelor of Science in Computer Science, Minor in Data Science

Bothell, WA

Sep. 2022 – Winter 2025

Avanade STEM Scholar, (GPA): 3.8, (Club) : BWiSe (Bothell Women in Science and Engineering)

TECHNICAL SKILLS

Languages: Java, Python, C++, JavaScript, HTML/CSS, SQL, R

Frameworks/Libraries: Flask, React, Node.js, Next.js, OpenCV, scikit-learn, spaCy, TfidfVectorizer

Operating Systems: Android, Windows, iOS, Linux

Developer Tools: cVAT, Git, Docker, Azure, VS Code, Visual Studio, PyCharm, IntelliJ, Eclipse, logging, Trello

Data Analysis & Machine Learning: SPSS, Power BI, cosine_similarity

Technologies & Tools: YOLO, cv2, base64, PyMuPDF (fitz), python-docx

EXPERIENCE

Full-Stack Software Engineering Intern @ Code For The Community

June 2024- Present

- Implemented MySQL for seamless integration, optimizing backend development to support sponsor ROMO's mission effectively
- Designed and developed frontend components for the resource page, enhancing user interface and interaction.
- Conducted cost analysis and budget planning using AWS hosting, **resulting in significant monthly savings**, empowering ROMO to allocate resources efficiently towards community outreach and user engagement.

UWB Hacks AI Participant

May 2024

University of Washington

Bothell, WA

- Innovated AI solution project for high schoolers, providing personalized guidance towards college.
- Conducted surveys to tailor solution to student needs in college application process.
- Developed website using HTML and CSS featuring Figma prototype in a 48 hour period.
- Achieved a **top 5 finalist** position at UWB Hacks AI among 350+ participants.

Online Tutoring Program Manager (CS & Math)

Jan 2022– Present

Remote Tutoring

Zoom

- Managed remote tutoring catered towards economically disadvantaged students in Computer Science and Math.
- Leveraged Zoom to provide personalized tutoring sessions, supporting student learning and engagement.
- Directed team efforts to ensure effective communication and educational outcomes in a remote setting.
- Achieved an outstanding **98% student satisfaction rate** through ongoing improvements.

PROJECTS

TalentFuse Web App | *SQLite, Flask, Python, NLP, Document Processing* June 2024

- Developed a Flask-based web application utilizing SQLite to store resume data, achieving streamlined recruitment processes with automated candidate evaluation based on TF-IDF similarity scores.
- Enhanced accuracy in resume-job matching by implementing cosine similarity scoring with scikit-learn, resulting in an average **85% alignment** between job descriptions and applicant resumes.
- Improved operational efficiency by integrating personalized feedback mechanisms, facilitating informed decision-making and optimizing recruitment workflows.

Helmet Detection Web App | *Computer Vision, Deep Learning, Yolo, OpenCV, cVAT*

June 2024

- Engineered a real-time helmet detection system using Flask and OpenCV, achieving **over 95% accuracy** through fine-tuning and optimizing the YOLOv3 model parameters.
- Enhanced detection robustness across varying lighting conditions by implementing advanced image processing techniques and model adjustments.
- Integrated a user-friendly interface for uploading and analyzing images/videos, ensuring reliable safety monitoring with precise helmet recognition capabilities.