Sarah Ibsen

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❖ https://github.com/sarahibsen

Active Security Clearance

EDUCATION

The University of Alabama in Huntsville   **Expected Graduation 2025**

Bachelor of Science in Computer Science   *(3.5/4.0 GPA)*   *Huntsville, AL*
- Art Studio Minor

EMPLOYMENT HISTORY

Astrion   **May 2023 - Present**

Software Engineer Intern   *Huntsville, AL*
- Developed a semantic chatbot for internal company data, allowing employees to query program-related information, enhancing productivity and knowledge sharing.
- Worked as a full stack developer on a RAG model, using Django as the backend, ensuring company data can be accessed and queried throughout the corporation.
- Worked as a frontend developer on data visualization projects, utilizing Godot, HTML/CSS/JavaScript, and Python's Dash library for clear, interactive insights.
- Worked hand and hand with customers on the MLIDs project, ensuring data security from overseas to our labs.

U.S Army Reserves   **May 2020 – Present**

Information Technology NCOIC (SSG)   *Huntsville, AL*
- Configuring networks, switches, and routers at the home station, ensuring seamless connectivity and operational efficiency.
- Software technical support for military computer and communications hardware, software, and equipment.
- Certified Holistic and Health Fitness Integrator, ensuring the unit's physical, mental, spiritual, nutritional and sleep readiness is up to par with the unit's mission.

Madison County School System   **August 2021 – August 2023**

Substitute Teacher   *Madison, AL*
- Serving as a resource for students, faculty, staff, and visitors with additional help or information.
- Use classroom management and teaching techniques to encourage participation within the classroom.

SKILLS

Security (Active Clearance)
Certificates: COMPTIA Sec+ 701
Programming languages: Python (PyTorch, Raylib, Pygame, Gymnasium), C/C++, HTML/CSS, Javascript, GDScript, Unity(C#), SwiftUI
Software: Cisco Packet Tracer, Dreamweaver, Adobe Illustrator and Photoshop
Languages: English (Fluent), Hungarian (Intermediate)

PROJECTS

Aerial Object Classification | *Python, PyTorch, OpenCV* | UAH

- Developed a system to automate the analysis and classification of aerial video footage, identifying and labeling objects based on Fourier transform and Scintillation index calculations.
- Engineered a data processing pipeline to handle and analyze video frames, feeding the processed data into a PyTorch-based image classifier.
- Collaborated with the engineering team to define project requirements and deliver a solution that meets business needs for automated video analysis.

RAG Model Chatbot | *Python, Django, AWS (EC2, S3)* | Astrion

- Built and presented a chatbot solution to leadership, gaining approval for team-wide distribution to enhance understanding of program materials.
- Engineered a Retrieval-Augmented Generation (RAG) model that allows teams to quickly retrieve and comprehend program-related information.
- Implemented a custom PDF parser to extract text from user-selected S3 files and populate individual EC2-hosted databases, which feed the RAG model.
- Designed the system to produce contextually relevant and accurate responses to user queries.

Wedding Planning | *Inkscape, Adobe Creative Cloud, Figma, Canva*| UAH Portfolio

- Designed and produced a full suite of wedding collateral, including engagement photos, save-the-date invitations, formal invitations, and a personalized couple's website.
- Directed the creation and management of detailed project documentation, including budget spreadsheets, planning timelines, and event schedules, to ensure client objectives were met.

VOLUNTEER

College of Science	**May 2023 - May 2024**
Ambassador	*Huntsville, AL*

- Aid in social media engagement and products and communicate with prospective students about UAH.

University of Alabama in Huntsville	**August 2025 - Present**
Mentor	*Huntsville, AL*