Malak Bachri (She/her)

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EDUCATION

Southern Arkansas University | Magnolia, AR **Aug 2022 – May 2026**

B.S. in Computer Science, Minor in Mathematics, Certification in Cybersecurity | GPA: 4.0/4.0

- **Courses:** Data Modeling and Application, Software Engineering, Operating Systems, Computer Architecture, Data Structures & Algorithms, Mobile App Development, UNIX/LINUX, Machine Learning, CyberDefense, Data Science.
- **Honors:** President's List, Honors Student, Awarded departmental merit scholarship for academic excellence.

TECHNICAL SKILLS

Languages (ordered by proficiency): Python (Pandas, Matplotlib, Plotly, PyTorch, OpenCV, pytest, TensorFlow), **Java**, **MySQL**, **C++**, Kotlin, R, Assembly
Tools and Frameworks: Docker, Git, Linux, Firebase, React, Node.js, Angular, Flask, Django, n8n, flowise, Selenium, etc.
Spoken Languages: English, Spanish, French, Arabic, Darija.

RELEVANT EXPERIENCE

Southern Aluminum | Magnolia, AR **May 2024 – Jul 2024**

IT intern

- Assisted in maintaining and upgrading company **hardware** and **software systems** across departments, ensuring minimal downtime and **data security** for 100+ employees.
- Developed and documented automated scripts and procedures to streamline repetitive IT support tasks.

DART Summer Coding Bootcamp | Online **Jun 2023 – Jul 2023**

- Utilized Python and R with models such as linear & logistic regression, random forests, k-means clustering, and ARIMA time-series analysis to analyze large datasets and present clear, data-driven insights to a jury and peers.

PROJECTS & PUBLISHED RESEARCH

Tax Filing Intelligent Assistant | *Senior Capstone Project* **Sep 2025 – Present**

- Built an AI-powered tax-filing system with a team, integrating OCR redaction and LLMs to automatically extract, interpret, and prefill 1040 forms with agent-based guardrailing and human-in-the-loop verification.

Al Shami, A., Bachri, M., Young, C., & Grissom, D. (2025). ***Persistent Homology and Segment Anything Model for Automated Localized Medical X-ray Segmentation (PH-SAM). In IntelliSys 2025, Springer.***

https://doi.org/10.1007/978-3-031-99965-9_37 | **Springer Nature** **Oct 2023 – Present**

- Developed a full PH-SAM pipeline using **Python**, **PyTorch**, **OpenCV**, and **Ripser** for automated segmentation.
- Co-authored a peer-reviewed publication with Springer Nature and presented at IntelliSys 2025 (Amsterdam).
- Won an award at the Arkansas DART Research Competition for innovation and impact.

A "Timely" Approach To Phishing Detection on Mobile Phones | *Ongoing Research* **Nov 2023 – Present**

- Collaborated with a research team to create a lightweight, feature-engineered multimodal phishing-detection pipeline optimized for real-time accuracy and speed on mobile devices.

LEADERSHIP EXPERIENCE

President of the AI Club | Magnolia, AR **Sep 2025 – Present**

- Led student members in AI projects (eg. Smart AI assitant), competitions, and certification programs.
- Taught practical use of AI tools such as **Msty**, **n8n**, **Flowise,** and more to enhance technical and creative skills.

Team Captain at the Collegiate CyberDefense Competition (CCDC) | Online **Jan 2025 – Feb 2025**

- Led a team of students in the national Collegiate CyberDefense Competition.