

# Malak Bachri

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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.
- **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), Java, MySQL, C++, Kotlin, R, Assembly

**Tools and Frameworks:** TensorFlow, Docker, Git, Linux, Firebase, React, Node.js, Angular, Flask, Django

**Spoken Languages:** French, Arabic, English, Spanish, 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** to analyze large datasets, test hypotheses, and extract meaningful insights, presenting data-driven findings and **visualizations** to professors and peers with clear technical communication.

## PROJECTS & PUBLISHED RESEARCH

Bachri, M., Al Shami, A., 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](https://doi.org/10.1007/978-3-031-99965-9_37) | Springer Nature

Oct 2022 – Present

- Developed a full PH-SAM pipeline using **Python**, **PyTorch**, **OpenCV**, and **Ripser** for automated X-ray segmentation.
- Authored a peer-reviewed publication with Springer Nature and presented at IntelliSys 2025 (Amsterdam).
- Won 2nd place in Arkansas DART Research Competition for innovation and impact.

A "Timely" Approach To Phishing Detection on Mobile Phones | *Ongoing Research*

Sep 2023 – Present

- Designed a lightweight multimodal phishing detection model optimizing accuracy and speed for mobile use.

Tax Filing Intelligent Assistant | *Senior Project*

Sep 2025 – Present

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

## LEADERSHIP EXPERIENCE

President of the AI Club | Magnolia, AR

Sep 2025 – Present

- Lead student members in AI projects, research, 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 CCDC | Online

Jan 2025

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