Ahmad Abdallah

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EDUCATION

Purdue University, West Lafayette, IN *Expected* **May 2025**

Bachelor of Science in Computer Science and Data Science. Bachelor of Arts in Economics. Minor in Mathematics
GPA – 4.0/4.0

Relevant Courses: Problem Solving And Object-Oriented Programming, Programming in C, Data Structures And Algorithms, Computer Architecture, Systems Programming, Real Analysis, Advanced Data Analysis And Machine Learning, Large Scale Data Analytics

Honors: ALDPES Honor Society member, Phi Kappa Phi Honor Society Member, Dean's List and Semester Honors from Fall 2021 to Spring 2024

EXPERIENCE

Part-Time Software Engineer, LightyAI **June 2023 – Present**

- Constructing LLM RAG system using text embeddings to infer user references within messages.
- Engineering GPT-4.0 prompts to extrapolate information about users from slack, email, and calendar data.
- Expanding front-end and back-end systems by implementing intelligent scheduling and dynamic language support.

Undergraduate Data Science Researcher, The Data Mine, Purdue University **Aug 2024 – April 2025**

- Collaborating with the Frederick National Laboratory for Cancer Research to expand the Spatial Single Cell Analysis (SPAC) package
- Researching and implementing unsupervised clustering methods (Leiden, DBSCAN, etc.) for spatial cell anndata
- Scaling up the capabilities of SPAC by accelerating clustering and dimension reduction algorithms in the future

Video-Based Object Detection Machine Learning Research Assistant, Purdue University **Sep 2022 – May 2024**

- Annotated video training data and pipeline radiographs for development of crack detection machine learning model.
- Researched and applied transfer learning on YOLOv5 model for video-based object detection of pipeline cracks
- Assisted head researcher with data manipulation

Abuerdan Summer Internship: Google Assistant Chatbot, Zamalek, Egypt **June 2022 – July 2022**

- Created conversational assistant for poultry businesses to provide real time updates on key performance indicators of farms.
- Worked with multiple new development tools such as Dialogflow, Google Cloud, and FastAPI.
- Learned about the dynamics of software development in agricultural field, specifically the poultry sector.

LEADERSHIP

Purdue Economics Association Vice President, Purdue University **Sep 2021 - Present**

- Oversee and conduct weekly meetings pertaining to economics for thirty members
- Coordinate events for students to discuss economic research and career opportunities with professors, graduate students, and alumni
- Connect club members to internship/job opportunities offered in Purdue.

Purdue Econometrics Team Captain, Purdue University **August 2022 – Present**

- Organized weekly team practice sessions, helping instruct 10-20 individuals
- Taught students the fundamentals of econometrics and causal inference methods
- Qualified and competed in UChicago Oeconomica Econometrics Competition

ITWorx Summer Internship: Newsletter Application, Nasr City, Egypt **July 2022 - Aug 2022**

- Headed a team of developers that created an application to manage the ITWorx monthly newsletter.
- Gained insight into software development at a prominent IT business.
- Acquired knowledge of React, NextJS, and MongoDB.

ADDITIONAL INFORMATION

Skills: Proficient in Python, Java, HTML/CSS. Intermediate in C/C++ and Javascript. Proficient in PyTorch, Tensorflow, and Keras. Intermediate in React and MongoDB. Novice in Django and FastAPI

Languages: Fluent in English, Native Arabic Speaker, Intermediate in Spanish.

Interests: Reading, Traveling, Programming, Cinema, Gymnastics.