# FARED FARAG

# COMPUTER SCIENCE GRADUATE

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### **EDUCATION**

### **Arkansas State University**

MS, Computer Science - Emphasis in Data Science

- Thesis topic: Nitrogen Recommender System Utilizing remote sensing in detecting nitrogen deficiencies
- Supervisors: Dr. Ahmed Hashem & Dr. Emily Bellis
- · Anticipated graduation: May, 2024

### **Arkansas State University**

BS, Computer Science

- Summa Cum Laude | 4.0 GPA
- · Recipient of Roy H. Jolly Rotary Scholarship
- Chancellors List | 2018 2022

May, 2022 Jonesboro, AR

May 2020 - Present Jonesboro, AR

June, 2022 - Present

Jonesboro AR

### WORK EXPERIENCE

### Arkansas State University, College of Agriculture

Graduate Research Assistant

- Stitched multispectral and thermal fields imagery using Pix4dMapper
- Analyzed and extracted data using ArcGIS Pro
- · Performed regression and variance analysis
- Managed/Maintained/Backed-up big data
- Developed un/supervised Machine Learning models for regression/classification tasks
- · Worked with multiple Machine Learning algorithms including XGBoost, SVMs, and K-Means
- Utilized R/Python in data analysis and visualization
- Programmed Python batch scripts for task automation
- Trained new hires on stitching/data analysis and extraction techniques
- · Aided in research papers by providing analyzed/visualized data

# PUBLICATIONS

### **Conference Presentation**

Hashem, A. A., Morris, M., Bellis, E., Farag, F., Huggins, T., Edwards, J., Reba, M. L., and McClung, A. (2022).
Rice Yield Prediction Using Unmanned Aircraft Systems. Oral presentation at the Cotton & Rice annual meeting, Jonesboro, Arkansas.

# **PROJECTS**

#### **Crypto Predictor**

- · Built a responsive web application using Express.js framework that allows users to predict crypto prices
- Developed a hypertuned XGBoost model for price predictions
- Web scraped trending tweets for the selected coin

### **Learning Management System**

- Built a responsive and secure web application using Express.js framework that provides a secure learning system for admin/student interactions
- Implemented role-based access control (admin/student/tutor)
- Applied MVC software design pattern to facilitate maintenance

## TECHNICAL SKILLS

### App Development

- JavaScript (Vanilla)
- C++
- HTML CSS
- Express.js Framework

### **Data Science**

- Python
- R
- Microsoft Excel

## Database

- PostgreSQL
- MySQL
- SQLite

## GIS

- ArcGIS Pro
- Pix4dMapper