MOHAMMAD ALMERRI

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EDUCATION

Purdue School of Engineering and Technology, IUPUI *January 2019 - December 2021*
Thesis based MS in Computer Engineering. GPA: 3.9

Purdue School of Engineering and Technology, IUPUI *August 2013 - May 2018*
BS in Computer Engineering with a Minor in Mathematics. GPA: 3.8

TECHNICAL SKILLS

Languages:	Assembly-ARM, Embedded C, C, C++, Go-Lang, Python, Java, matlab
Tools and Technology:	Linux (Ubuntu, Red Hat, Raspbian), RTOSLatex, Git, NS3, TensorFlow: Keras, Robot Operating System (ROS), Amazon-AWS
Databases:	MySql, MongoDB
Version Control:	Github

PUBLICATION

mTRE-PAN: A Thesis on the development of a input-agnostic globally interpretable model to model translation in artificial intelligence. *Expected publication: December 2021*

PROJECTS

mTRE-PAN Spring 2020 - Fall 2021
Master's Thesis

· A novel ensemble model designed to tackle the problem of "black box" non-accountability in AI.
· capable of extension to any existing pre-trained/deployed model without any interruption.

Petri-Net Controller for Cat and Mouse problem Fall 2020
Discrete event dynamic systems

· Built a Petri-Net Controller in Matlab, controlling doors in a home to maximize movement while preventing catastrophic failure in the Cat and Mouse problem.

Data Classification Spring 2020
Optimization methods for systems and controls

· Developed both parametric (multilayer) and non-parametric (KNN, Parzen Window) classifiers, and the techniques required to train them.

US Grant-maker similarity as a function of proximity Fall 2019
Social Networks with machine learning

· Utilized single and multilayered classifiers To predict labels of clustered data as part of multidisciplinary project.

Pun Generator Spring 2019
Database Management Systems

· Deployed a webpage based pun generator hosted on an Amazon-EC2 Linux server.
· Featuring multi-level user registration and permission front-end, developed with Go-Lang, python and HTML. Server back-end developed used both relational and non-relational Databases (mysql, MongoDB).

AgBot Weed and Feed competition ***2nd place (university all time high)*** Spring 2018 - Fall 2019
Senior Design

- Converted a Yamaha 4x4 into an autonomous robot capable of fertilizing crops and recognizing one of three native Indiana crop weeds via image classification, and then spraying it with a specific weedkiller.
- Extensive multi-team, multi-shareholder, multi-department, multi-sponsor project.
- Ground up conversion combining mechanical, electrical and computer engineering.

Predicting Power Outages Using NOAA Weather and ANN Fall 2017
Artificial Intelligence

- Programmed from scratch an artificial neural network to predict weather caused power outages in northern Indiana using C++.

ACADEMIC ACHIEVEMENTS

Honors college Undergraduate member.

Tau Beta Pi engineering honor society member.

Deans list member from Fall 2015 onward.

EXTRA-CURRICULAR

As part of an outreach program to encourage women in STEM: organized, developed and taught a AI-focused week long program to high school students. *Summer 2019*

Extensively privately tutored other students for free, as a result faculty have requested me to act as a Teaching Assistant on multiple occasions. Nearly entire school career