Mazen Alotaibi

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EDUCATION

Oregon State University *College of Elect. Eng. & Comp. Sci.*   Corvallis, OR (Sep, 2015 - Present)
B.S. in Computer Science Applied in Artificial Intelligence, with Minor in Actuarial Science (GPA: 3.67/4.0).

Core Courses: Objected-Oriented Programming, Data Structures, Analysis of Algorithms, Databases, Computer Architecture and Assembly Language, Digital Logic Design, Theory of Computation, Computer Networks, Operating Systems, Artificial Intelligence, Software Engineering, Parallel Programming, Machine Learning and Data Mining,, Discrete Mathematics, Linear Algebra, Probability, Statistics, Numerical Analysis, and Mathematical Statistics.

TECHNICAL SKILLS

Programming Languages(Experienced): C/C++, JavaScript, Python, Bash, and R.
Programming Languages: MATLAB, PHP, Java, and NGINX.
Frameworks: NumPy, Matplotlib, OpenCV, PyTorch, Keras(TensorFlow), Flask, Node.js, and React.js.
Tools: Git, SQL, NoSQL, Markdown, and LaTeX.
Languages: Arabic (Native), English (Professional Proficiency), and Japanese (Elementary Proficiency).

ACADEMIC AND PERSONAL PROJECTS

Image Captioning   July, 2018 - August, 2018
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- Built a **Convolutions Neural Network-Recurrence Neural Network** (CNN-RNN) model to automatically generate captions from images using **NumPy**, **OpenCV**, and **PyTorch**.
- Trained the *CNN-RNN* model on **MS COCO dateset** that takes any image and automatically generate captions that describes the image with a probability score of likelihoods of accuracy.
- Trained the Encoder[*CNN*] for feature extracting and trained the Decoder[**Long Short-Term Memory** (LSTM) cells in *RNN*] to generate captions.

Facial Keypoint Detection   June, 2018 - July, 2018
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- Built a *CNN* model to predict Facial Keypoints using **NumPy**, **OpenCV**, and **PyTorch**.
- Trained the *CNN* model to detect faces and predicts **68 distinguishing keypoints** on that face.
- Pre-processed input images to the *CNN* model from noises for training using *Modern Computer Vision Techniques*.

Self-Driving RC Car *(Club)*   May, 2018 - June, 2018
https://github.com/OSUmlaiclub/SelfDrivingRCCar/tree/mazen

- Wrote a web app that streams a live-feed and a controller to control an RC Car's controller, **Raspberry Pi**, using **Node.js**, **JavaScript**, and **Python**.
- Researched and cleaned a set of datasets in a cloud-server to be used to train the machine learning model.
- Built the structure of the intelligent agent and machine learning model.

Image Classification *(Academic)*   May, 2018
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- Wrote an **Multiple Layer Neural Networks** (MLP) that classifies images using **NumPy** and **PyTorch**.
- Trained the *MLP* model using **CIFAR-10 dataset**.
- Documented and reported the *MLP*'s accuracy and results using **LaTeX**.

Aces Up Game *(Academic)*   November, 2017 - December, 2017
https://github.com/iamalotaibi/AcesUp.game

- Wrote a web app with a team using **Java** *Ninja framework* for back-end, **JavaScript** for front-end, and **Heroku** and **GitHub** to host the web app.
- Built interactive animations and a tracking system using *JavaScript.*
- Won the **Best Web Application for Software Engineering I** *(CS-361).*

Personal Website December, 2016

https://iamalotaibi.me/

- Wrote a personal website using **Node.ks** for back-end and **JavaScript** for front-end.
- Hosted my website on virtual machine (**DigitalOcean**).
- Wrote a **NGINX** script that directs HTTP requests to HTTPS and maps networks.

A.I. Algorithm for a 2D Grid Game April, 2016

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- Wrote a 2D grid game, *Hunt the Wumpus*, with a dynamic grid size using **C++**.
- Wrote an embedded intelligent agent, inspired by *Minesweepers*, to solve the game using *Probability Distribution Methods*.
- Acquired code organization skills by modularizing my programs and defining appropriate classes.

EXPERIENCE

OSU Machine Learning/A.I. Club Corvallis, OR (May, 2017 - Present)

Active Member

- Worked with a team on *Self-Driving RC Car*.
- Applied my knowledge in web development and machine learning to build the first prototype.

Saudi Aramco Summer Program Dhahran, Eastern Province (Summer 2012)

Lead Photographer

- Managed a team of 6 photographers to document summer program events
- Hosted and organized multiple teaching photography sessions for **more than 70 inspired photographers**

EXTRACURRICULAR ACTIVITIES

PyImageConf2018 *(Conference)* San Francisco, CA (August, 2018)

Attendee

- Attended a conference that focuses on advanced techniques in *Computer Vision* and *Deep Learning* research and their implementations to solve real world problems.
- Built a **Faster Regional Neural Networks** (Faster-RNN)'s logic from scratch to classify images with higher accuracy than well-known networks using **NumPy** and **PyTorch**.

DesertHacks *(Hackathon)* Phoenix, AZ (February, 2017)

Participant

- Worked with a team to build a web application that analysis a user's behavior from a list of previous behaviors based on *Markov Chain Methods* using **Node.js** and **Flask** for back-end, **JavaScript** for front-end, **Python** for data analysis, and **SQL** for data saving and pulling.
- Hosted the web application on **Amazon Web-Services** (AWS).