Menatallah Hammad
Curriculum Vitae

PERSONAL DETAILS

Birth	August 24, 1996
Phone	+20-1127142207
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EDUCATION

Bachelor of Aerospace and Robotics Engineering, 2014-2019
University of science and technology at Zewail City, Egypt.

High School 2013 - 2014
Futures Language schools,
With grades of 99.6%

EXPERIENCE

Research Intern Dec-2019-current
At the Center of Pattern Analysis and Machine Intelligence, University of Waterloo.

I am currently working on project entitled "Movie Story Telling " with my twin sister in which we utilized deep learning and computer vision as well as natural language processing techniques to and generate commentary based on the extracted data to be able to describe the actions happening, people and speech sentiment inside the movie scene . .

Research Intern Jul-Oct.2018
At the Center of Pattern Analysis and Machine Intelligence, University of Waterloo.

During the time of the internship, worked on a project entitled "*Automated Theorem Proving*". I have used Neural Machine Translation (NMT) to translate from informal (Latex/English) to formal ATP compiled format (Mizar/Isabelle/HOL Light).

Research Intern July-Oct. 2017
At the Advanced Development Division, Sypron Solutions.

During the time of the internship, I was using machine learning platforms including deep neural networks for Online failure prediction and sensored IOT prognostics for oil and gas applications.

Part time online job Jun-Aug.2017
For a private organization,

I worked with a team to develop a "chatterbot" for social service using deep learning question answering algorithm.

Senior Intern 2014 -2018
At the Communications and Aerospace Technology Center, Zewail City For Science and Technology.

- Worked on Gazebo simulation of "FourWD ROS package " Used Robot Operating System (ROS) and gazebo simulation environment to simulate smart robot able to autonomously navigate "Willow Garage gazebo environment" and map its environment using four types of Simultaneous localization and navigation algorithms (SLAM)

- Worked on "Gazebo Simulation of Roomba cleaning robot". Used Robot Operating System (ROS) and gazebo simulation environment to simulate smart cleaning robot that navigates indoor environments using SLAM algorithms and acquiring images from camera it uses semantic image segmentation and recognition for obstacle avoidance

- Worked on Quad-copter trajectory prediction in Gazebo outdoor simulation environment. Used LSTM-gated recurrent neural networks for quad-copter trajectory prediction given its initial coordinates and speed

- Worked on "Behavioral Cloning Model for Self driving car simulation". Used convolutional neural networks to train an autonomous car to drive human like in outdoor Udacity (Unity)simulated environment

- Orbital mechanics toolkit
    - Python implementation of genetic algorithms for optimizing earth centered impulsive transfer trajectories and target specified boundary conditions

    - Python implementation of Particle Swarm Optimizer for earth centered transfer Low thrust finite-Burn trajectories and target specified boundary conditions

    - C++ Implementation for orbit determination and space trajectory optimization

    - Python Implementation for orbit propagation/simulation/TLE parsing

    - Worked on" road segmentation and lane detection ". Used the fully convolutional deep neural networks for semantic road segmentation and lane detection

    - Worked on "solving Navier Stokes Partial Deferential Equation". C++ Implementation for numerical solver using genetic algorithms simulated using (OpenGl)

SKILLS

Languages	English, Arabic, German, French
Programming	Several programming languages including: C/C++, Python, and Matlab.
Software Platforms	Several machine learning platforms including; DialogueFlow, TensorFlow, Torch, Theano, Keras, Caffe, Deeplearning4j, and OpenCV
Personal	Excellent presentation skills, Enjoys working in a team.

NOTABLE COURSES

- Deep learning   2019
- Natural language processing   2019
- Natural language processing specialization(Coursera)   2018
- Advanced control of autonomous vechiles   2018
- Slam course (Cyrill Stachniss)   2018
- Deep learning specialization (Coursera)   2017
- MIT Self Driving Car (Open course ware)   2017
- Machine learning and data analyitics   2017
- Artificial intelligence for robotics(Udacity)   2016
- Neural networks for machine learning (coursera)   2016
- ACM/ECPC training   2016
- Discrete mathematics   2016
- Signals and systems   2015

HONORS AND AWARDS

- Achieved the highest grades and being the top student among more than 100 students in my graduation year, 2014, in the GSE high school (grade 99.6 %).
- Awarded a full funded scholarship for four years to study my bachelor degree at University of science and technology at Zewail city.   2014

EXTRACURRICULAR ACTIVITIES

- Marketing and Public relations intern at Sypron solutions   2017
- Public relations member at Euroavia-ZC   2016
- German kindergarden teacher at Ägyptisch-Deutsches Kulturzentrum (ADK) 2016

REFERENCE

Will be provided on demand.