

Mohamed Moustafa

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EDUCATION

Bachelor of Science in Aerospace Engineering
Wichita State University, Wichita, KS

May 2018
Dean's Honor Roll, 3.67 GPA

Bachelor of Science in Physics, Minor in Mathematics
Emporia State University, Emporia, KS

May 2017
Presidential Scholar, Cum Laude

Relevant Coursework: *Computational Fluid Dynamics, Flight Structures: Intro to Finite Element Method, Engineering Digital Computations, Numerical Methods, Aerodynamics I/II, Linear Algebra, Differential Equations*

PROFESSIONAL EXPERIENCE

Research Assistant
Department of Aerospace Engineering, Wichita State University, KS

Jan. 2017 - Present

- Developed adaptive controls models for predicting future-time aircraft loss of control and implemented pilot-warning instruments using the Google Glass and Microsoft HoloLens augmented reality devices in Java and C#.
- Performed research on machine learning of quantum systems for NASA's D-Wave quantum computer and created novel implementations of real and complex-valued neural networks using Python and Matlab.

Independent Full-Stack Developer

June 2011 - Present

- Designed and built high-performance production applications and solutions using HTML5/CSS, JavaScript (Node.js, React, jQuery), Python, PHP, RESTful APIs and cloud SaaS for professional clients and organizations.
- Trained 2-4 member development teams, managed GIT version control systems, administered MySQL/NoSQL databases and oversaw day-to-day Linux server operations.

Graphic Designer
Center for Student Involvement, Emporia State University, KS

Feb. 2014 - Jan. 2016

- Designed identities and promotional materials for 6 sub-offices, including logos, flyers, posters, brochures and digital media with Adobe Photoshop, Illustrator and InDesign.

RELEVANT EXPERIENCE

Copenhagen Suborbitals Reentry Analysis

Feb. 2017 - Present

Organized a student team to conduct aerodynamic drag and stability analysis for a supersonic reentry capsule using CFD and wind-tunnel testing. Conducted as part of design review for the Denmark-based space company.

Stanford University Innovation Fellow

Jan. 2017 - Present

Selected to participate in—and completed—training program on entrepreneurship, creative confidence, and design thinking through Stanford's D-School. Worked with Wichita State faculty and administration to develop innovative spaces, host experiential events, and advocate institutional modernization.

Flight Simulation Application

Aug. 2016

Developed a web-based application to simulate flights from raw aircraft recorder data and satellite imagery, enabling rapid post-flight analysis. (<http://sim.mmoustafa.com>)

PUBLICATIONS

Behrman, E.C., J.E. Steck, and M.A. Moustafa. "Learning Quantum Annealing." *Quantum Information and Computation*, Vol.17, No. 6, May 2017.