

EDUCATION

Washington, DC	Catholic University of America	Fall 2010 - Spring 2015
<ul style="list-style-type: none">• Master of Computer Science, dual Master's expected May 2015, GPA: 3.4• Master of Mechanical Engineering, dual Master's expected May 2015, GPA: 3.4• Bachelor of Mechanical Engineering, May 2014, GPA 3.4		

Certifications: Passed Fundamentals of Engineering Exam Fall 2013, Mechanical Engineering EIT

Honors: Graduate Tennis Assistantship, CUA Dean's List 2012-Current, ASME District Scholarship 2013

PROJECTS AND ACTIVITIES

Hackathon Competitor:	2014 RamHacks "Best Wearable App using an External API" 2014 Hackathonukah 1st place overall
Tutor:	MATLAB
Teaching Assistant:	Aerospace Design, Mechatronics, Flight Dynamics, Engineering Dynamics
UAV/UAC Design:	Senior Design Project: 2014 SAE Aero Design East Challenge (Captain)
Leadership:	ASME President 2012-2013, SHPE Vice President 2013-2014
Guest Lecturer:	Lectured 1.5 hour graduate level class on aircraft stability and control
Varsity Tennis Team:	Graduate Assistant Coach 2014, All-Landmark Conference 2012, Conference Champion 2014, NCAA DIII tournament berth 2014
Technical Conference Attendee:	2015 Open Data Day DC, 2014 NVIDIA U. Maryland GPU Summit

TECHNICAL SKILLS (p = proficient, c = competent, pe = prior experience)

Programming Languages:	C (c), C++ (c), Java (c), Javascript (c), MATLAB (p), Python (pe)
Web Development:	HTML (c), CSS (pe), Java applets (pe), jQuery, Bootstrap
Embedded Programming:	Arduino, Spark IO, Intel Edison, Raspberry Pi, VHDL
Heterogeneous Programming:	CUDA C
External Libraries:	OpenGL, LWJGL, Three.js, Leaflet, Swing, jMonkeyEngine
Tools:	Vim, Bash, SSH, Git, Node.js, Bower, Npm
Development Environments:	Eclipse, NetBeans, Visual Studio
Operating Systems:	Mac, Linux (Debian-Based Distributions), Windows
Other Software:	LaTeX, Solidworks, AutoCAD, XFOIL, XFLR5

EMPLOYMENT

Comp. Vision Lab Researcher	Catholic U.	Aug. 2014 - Present
<ul style="list-style-type: none">• Implemented Digital Image Correlation algorithm in C++ to extract audio from silent video• Investigated structured light and optical techniques for 3D shape reconstruction applications		
Comp. Graphics Lab Researcher	Catholic U.	June 2014 - Aug. 2014
<ul style="list-style-type: none">• Programmed in Java using Lightweight Java Gaming Library (LWJGL) with OpenGL to create a wavefront OBJ loader and renderer for triangular-based mesh rasterization• Included Java Swing features to create a GUI for OBJ mesh navigation		
Student Engineer	NASA Goddard & Catholic U.	Sept. 2013 - Aug. 2014
<ul style="list-style-type: none">• Collaborated with NASA engineers and other CUA students to design, build, test, and launch a student built attitude determination payload for the Undergraduate Student Instrument Project• Developed python script to capture images of stars from ~27,000 ft using a Raspberry Pi & DSLR		
Patent Examiner Extern	US Patent & Trademark Office	June 2013 - Aug. 2013
<ul style="list-style-type: none">• Performed technical investigations towards the process of granting or denying patent applications• Perused through relevant technologies in order to evaluate novelty, nonobviousness, and other patent qualifying conditions		
Intel. Materials Lab Researcher	Catholic U.	Apr. 2012 - Dec. 2013
<ul style="list-style-type: none">• Fabricated circuit embedded composite materials used in stress detection and structural health monitoring• Conducted three point bending and tensile tests on composite samples then plotted relationships for stress, strain, resistance, and current in real time until rupture		

PUBLICATIONS

Z. Wang, H. Nguyen, and J. Quisberth, "Audio extraction from silent high-speed video using an optical technique," Optical Engineering, in press, 2014