Brian Hildebrand

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Skills

Foreign Languages:	German
Programming Languages:	C, C++, PHP, Python, Java, JavaScript, HTML, CSS, PIC 16F62X Microcontroller Assembly Language

Publications

- *Blind Signature Schemes for Secure and Trusted Electrical Voting and Cashing Systems* in *Security and Resilience of Cyber Physical Systems* ISBN 9781032028569: https://www.amazon.com/Security-Resilience-Physical-Systems-Cyber-Physical/dp/1032028564
- *A Comprehensive Review on Blockchains for Internet of Vehicles: Challenges and Directions:* https://doi.org/10.1016/j.cosrev.2023.100547
- *Challenges and Directions and Recent Advances in Quantum Networks: Design, Reliability and Security and Trust* (in process)

Courses Taught

- *Human-Computer Interaction* IT319 course, Winter 2022, Winter 2023
- *Web Publishing Technology* CMT 421, Fall 2022
- *Managing Virtualization and Cloud Computing* IT 356, Fall 2022

Education

Eastern Michigan University, Ypsilanti, MI
Doctor of Philosophy, Technology, *Cybersecurity*, December 2023

- Full-time Graduate Assistant to Dr. Che, Director of School of Information Security and Applied Computing, January 2023 – May 2023
- Full-time Graduate Assistant to Dr. Amsaad, professor for the School of Information Security and Applied Computing, September 2020 – May 2022
- Designed and setup of Hardware Security Lab
- Dissertation: *Blockchain E-voting Platform Secured by Quantum Encryption* (in progress)

Eastern Michigan University, Ypsilanti, MI
Master of Science, Computer Science, December 2019

- Full-time Graduate Assistant to Dr. Gregory, Interim Director of the School of Technology and Professional Services Management, January 2018 – December 2019. Assisted department with various projects such as updates to school website and graphical design of brochures, posters, and other printed or digital media.
- Research Project: Built AI that composes melodies using symbiotic evolution and a corpus of midi files as a training dataset. Wrote research paper and defended it in front of three-person committee on December 11th, 2019

Lansing Community College, Lansing, MI
Associates in Science, Computer Science, August 2015

- Honor Roll, President's List, and Next Generation Endowed Scholarship
- Awarded full tuition federal grant through e-Pathways program

Ave Maria School of Law, Ann Arbor, MI and Naples, FL
Juris Doctorate, May 2010

University of Dallas, Irving, TX
Bachelor of Arts, History, May 2003

- Dean's List, Honor Roll
- Senator for Student Government and Recycling Committee Chair

Volunteer Work

Detroit Auto Show 2022

- Represented EMU at the Detroit Auto Show by building a hardware security demonstration for a traffic light intersection
- Demonstrated how good hardware security design can be employed to defend against hardware trojans

Digital Divas 2018 and 2019

- Assisted in running an input device lab to teach middle and high school girls the basics of electronic circuits, conductivity, and interacting with computers.
- EMU Program designed to encourage middle and high school young women to develop an interest in the STEM fields. *emich.edu/digitaldivas*

Digital Dudes 2019

- Assisted Dr. Fathi Amsaad run an autonomous vehicle lab where we taught middle and high school boys how to build and program miniature smart cars.
- EMU Program is designed to encourage middle and high school young men to develop an interest in the STEM fields. *emich.edu/digital-dudes*

Michigan DECA Annual Career Development Conference 2019

- Represented EMU by serving as judge for Entrepreneurship competition.
- DECA is an international organization and competition that prepares high school and college students to become leaders and entrepreneurs in marketing, finance, hospitality and management. *mideca.org*

CyberPatriot CyberCamp Summer 2018

- Assisted in teaching middle school students about Cybersecurity in preparation for national competition.
- CyberPatriot is a the National Youth Cyber Education Program created by the Air Force Association (AFA) to inspire K-12 students toward careers in Cybersecurity or other STEM disciplines critical to our nation's future. *uscyberpatriot.org*

STEAM Camp 2018

- Assisted in running EMU presentation table for STEAM portion of camp.
  Instructed campers on how to fly drones and run a flight simulator.
- Hosted by Detroit Lions' safety Don Carey, the Football & STEAM Camp was designed to encourage Detroit youth, ages 8-17, to explore career options in the fields of science, technology, engineering, arts, and mathematics.
  reechfoundation.org/events/steam-camp-detroit

High School Programming Competition 2019 – EMU Computer Science Department

- Helped run Drone Racing Competition to teach students how we programmed drones in our Cloud Computing course.
  emich.edu/computer-science/events/hspc/2019
- Co-developed Python scripts to collect live data from flying drones and send it to cloud database.
- Designed and built front-end leaderboard for competition that displayed live data drawn from cloud database.

Professional Work Experience

President and Lead Developer   3/2017 – present
Arbor Web Guru LLC, Ann Arbor, MI - *arborwebguru.com*

Web Developer for International Catholic Jurists Forum – icjurist.org

- Built custom WordPress website for client to showcase their research, publications and media

Web Developer for Quotient HR – quotienthr.com

- Built custom WordPress website for client to showcase their HR programs and services

Web Developer for Traffic Court Buddy – trafficcourtbuddy.com

- Designed and developed custom WordPress plugin and widget for website that provides a dynamic form dialog for users to upload traffic tickets and seek legal assistance

Web Developer for Sunburst Real Estate Group – sunburstregroup.com

- Assisted client with various updates to website including installing and configuring plugin for displaying client's real estate listings in both grid and map view

Web Developer for Tyler Rental Properties – tylerrentalproperties.com

- Installed, configured and customized Joomla rental property listing extension for Texas real estate client and wrote custom Joomla extensions in PHP.

Web Developer for Tour the Glades Private Wildlife Tours – tourtheglades.com

- Designed and developed custom WordPress website for client that allows users to read about tours and book them over the website

Web Developer for Lumen Ecclesiae Press – golepress.org

- Designed and developed custom WordPress plugin and widget for client's website that displays a user interface for students to learn about cardinal and theological virtues and gifts of the Holy Spirit. Client sells educational materials to educators across the globe.
- Built custom WordPress plugin to help client migrate to new warehouse distribution center. Plugin features useful backend tools for client to access the new warehouse's API and the ability to run custom daily and hourly scripts.

Developer II   2/2016 – 3/2017
Nexient, Ann Arbor, MI

Front-End Developer for Choice Hotels International, Inc

- Developed multiple features and defect fixes such as Omniture tracking optimization, search filter enhancements, and ADA compliance with screen readers and assistive technologies.
- Completed ADA Compliance Certification.

Front-End Developer for Best Buy AgentUI Application

- Setup front-end unit testing framework for project and gave Unit Testing Lunch-and-Learn presentation in September 2016.
- Sole front-end developer for Best Buy Queue Boards using Gulp, JQuery, and CSS, an application that displays Geek Squad customer appointments on large screen.
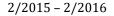
Developer I   2/2015 – 2/2016
Nexient, Ann Arbor, MI

Front-End Developer for Best Buy AgentUI Application

- Co-developed custom web application for Geek Squad using Angular JS, including custom responsive calendar for scheduling appointments.
- Team Awarded Nexient Award for Customer Focus.

Front-End Developer for NBCUniversal MoveCommand Application

- Co-developed custom web application for client using Angular JS, Express JS, Node JS, and MySQL with features including custom bar, line, and pie graphs using Google Charts and custom code for PDF preview and exportation of data to Excel format.