John M. Wydra

Software Engineer

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Professional Experience

General Electric Healthcare — **Chicago, IL**
Software Engineer (EEDP) — July 2019 – Present

- Designed and implemented a user-group permission hierarchy for feature access from start to finish for several application features on a browser-based image viewer
- Containerized a browser based medical image viewer using Docker resulting in significant cost savings from the previous VM based system
- Implemented the Typescript front-end design and Java logic of a new component on a site-diagnostic web tool
- Employed an AES encryption algorithm with Java for user passwords and migrated user information from a local configuration file to a database store

Aptiv — **Troy, MI**
Autonomous Driving Computer Science Intern — Summer 2018

- Led and completed a four-stage design of experiments project evaluating eight different Inertial Measurement Unit (IMU)/GPS devices and four different position correction services, leading to recommendations for future development through the entire production cycle of autonomous technology
- Performed technical statistical analysis on IMU/GPS data from both the car's internal network (CAN) and serial sources and translated this analysis into a recommendation that led to an 84% reduction in unit cost
- Designed and implemented a hardware alternative for collecting data and pushing new configurations to IMU/GPS units to combat heavy data flow, resulting in a decrease of data loss from 50% to less than 1%

Great Expressions Dental Centers — **Southfield, MI**
Software Development Intern — Summer 2016 & 2017

- Gained Visual Basic (.NET) professional proficiency by developing several internal applications including a remote computer scanner to allow the help desk to quickly check through a computer for commonly found errors
- Developed a full-stack network scanning tool using Visual Basic and SQL to expedite IT service and response

Projects

- HuddlBot.com
  - Worked with Michigan State IT Services on this university capstone project to create a webtool aimed to aid with student group work
  - Designed and implemented an app which keeps students' information more secure while also making communication and meetings simpler
  - Won the Urban Science Sigma Award for Best Overall in the Capstone
- Raspberry Pi Smart Mirror & PIR Motion Sensor
  - Modular nodeJS project which displays a user's dashboard (time, weather, sports scores, etc.) on a monitor behind a two-way mirror
  - Integrated Google Assistant with the mirror and can interact with the mirror using the wake word 'Jarvis'
  - Utilized a passive infrared (PIR) sensor to sense motion and put the mirror to sleep while not in use
- Raspberry Pi Network Scanner
  - Watches the local networks devices and the incoming/outgoing packets from those devices

Education

Michigan State University,
The College of Engineering:
Computer Science & Engineering (B.S.) • 3.79/4.0

Georgia Institute of Technology
Master of Computer Science: Concentration: Computing Systems (M.S.) • Expected Graduation: 2023

Skills

Languages:

C++ | Python | Java | SQL | Visual Basic | PHP | C# | AngularJS | C | MATLAB | TypeScript | YAML | XML | VueJS

Technologies:

Git | AWS Deployment | MongoDB | Docker | Kubernetes | REST | SOAP | LINUX | UNIX | Mac | Windows

Awards & Honors

- **Michigan State University Dean's List** (x8 – Every semester)
- **Urban Science Sigma Award –** Best Overall Computer Science Capstone Project
- **Advanced Computer Networks (CSE 422) Teaching Assistant**