John M. Born

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EDUCATION

University of Illinois at Urbana-Champaign — August 2016 – December 2019
B.S. Computer Engineering — GPA: 3.71/4.00
St. Charles East High School — August 2012 – June 2016
High School Diploma — GPA: 5.0/5.0

EMPLOYMENT

University of Illinois at Urbana-Champaign — Champaign, IL
Lead ELA (Engineering Learning Assistant) — November 2018 - Present
- Lead departmental meetings to adjust and create lesson plans

ELA (Engineering Learning Assistant) — August 2018 - Present
- Teach ENG 100 – Introduction to Engineering for Undeclared and Pre-Engineering freshmen
- Guide students in navigating higher education, choosing majors, and finding career paths

Kellogg's — Oak Brook, IL
IT Intern – Lead Developer — May 2019 - August 2019
- Led 10 interns through workshops on React Native, Git, debugging, and agile team work flows
- Developed a mobile app displaying events and resources for disadvantaged Chicago communities

IT Intern — May 2019 - August 2019
- Deployed a GPS shipment tracking solution trial run for Kellogg's North America region
- Utilized UiPath to automate sales data pipelines on the RPA team (Robotics Process Automation)
- Attended B2B API meetings to learn about enterprise software solutions

USGS (United States Geological Survey) — Champaign, IL
Programming Assistant — July 2018 - May 2019
- Developed FluEgg (a fluvial asian carp egg simulator) to quantify negative impacts of invasive species
- Ensured FluEgg API is maintainable, well-documented, and object-oriented
- Created FRMC GUI and backend (calculates the toxicity of fire retardants for US Forest Service)

ACTIVITIES

Swarm Robotics Research — Champaign, IL
Research Assistant — February 2017 - January 2019
- Created 3D CAD hardware models for individual robots to be used in a swarm
- Explored theoretical models of robotic systems (including consensus, linkage, sensors, etc.)
- Utilized modeling programs in Python

iRobotics Executive Board — Champaign, IL
Treasurer — June 2017 - June 2018
- Approved robotic part purchases totaling to approximately $20,000 annually
- Tracked team sponsorships and ensure funds are allocated correctly
- Organized and update account balance spreadsheets

Web Master — February 2017 - June 2017
- Updated and maintained information on the organization's website
- Utilized basic CSS and HTML to modify website functionality

Combat Robotics — Champaign, IL
Member — September 2016 - June 2018
- Collaborated with team members to design and develop a 30lb. battle-bot
- Designed 3D CAD model of battle-bot with team
- Competed in annual Robobrawl competition to destroy 16 other battle-bots

Study Abroad — Madrid, Spain
Student — May 2017 - July 2017
- Took classes in Entrepreneurship, Internet of Things, Spanish Culture, and Spanish Language
- Conducted research on magnetic hysteresis in circuit simulators
- Experienced Spanish culture by exploring cities and speaking with locals

PROJECTS

EEG Headset Controller

- Parsing EEG headset brainwave frequency spectra to control video games in place of traditional controllers

Poker Tracker App
- Creating Android application to track poker games in place of physical poker chips

SKILLS

Programming Languages
- Proficient in Python, C++, C, JavaScript
- Experience in HTML, C#, Java, MATLAB, x86 Assembly, Mathematica

Frameworks
- PyTorch, React Native, WebGL, Unity, PyQT, UiPath

Environments and IDEs
- Git, Github, GitLab, Unix CLI, Jupyter Notebook
- Android Studio, Visual Studio Code, PyCharm, IntelliJ, Arduino IDE

Other Skills
- Scaled Agile Framework certified (SAFe for teams practitioner)
- Multimeter, oscilloscope, function generator
- Spanish (conversational proficiency)

HONORS

University of Illinois at Urbana-Champaign
- Chancellor's Scholar – 2% of students per class, Honors Contract fulfillment each semester
- James Honors Scholar – Greater than 3.5 GPA, Honors Contract fulfillment annually, Honors project
- Dean's List – Top 20% of engineering class, 2 semesters
- Provost Scholarship – 30 students per class, full tuition for 4 years

COURSEWORK

University of Illinois at Urbana-Champaign

2015-2016
- MATH 241 – Calculus III

Fall 2016
- CS 125 – Intro to Computer Science
- ECE 110 – Introduction to Electronics
- PHYS 212 – University Physics: Electricity and Magnetism
- ARCH 199 – Undergraduate Open Seminar: Architecture and Innovation
- ENG 100 – Engineering at Illinois for Freshmen
- ENG 101 – Engineering Orientation

Spring 2016
- CS 126 – Programming Studio
- CS 173 – Discrete Structures
- ECE 120 – Introduction to Computing
- MATH 415 – Applied Linear Algebra
- FSHN 199 – Taste of Food Science
- LAS 291 – Global Perspectives - Pre-Departure

Summer 2016
- Intermediate Spanish I
- Intermediate Spanish II
- Spanish Culture
- Internet of Things
- Introduction to Entrepreneurship
- Research Project: Magnetic Hysteresis Simulation

Fall 2017
- CS 225 – Data Structures
- ECE 210 – Analog Signal Processing
- MATH 285 – Intro to Differential Equations
- PHYS 213 – University Physics: Thermal Physics
- PHYS 214 – University Physics: Quantum Physics
- KIN 340 – Sociology and Psychology of Physical Activity
- LAS 292 – Global Perspectives - Abroad

- ECE 200 – ECE Seminar

Spring 2018

- CS 418 – Interactive Computer Graphics
- LING 406 – Computational Linguistics
- ECE 391 – Computer Systems Engineering
- ASTR 330 – Extraterrestrial Life
- ENG 398 – ELA Leadership Training

Fall 2018

- CS 419 – Production Computer Graphics
- ECE 310 – Digital Signal Processing
- ECE 311 – Digital Signal Processing Lab
- CS 440 – Artificial Intelligence
- CS 374 – Algorithms and Models of Computation
- ECE 200 – ECE Seminar

Spring 2019

- ARTD 209 – Chado (The Way of Tea)
- CS 446 – Machine Learning
- CS 498 – Virtual Reality
- ECE 313 – Probability with Engineering Applications
- ECE 314 – Probability in Engineering Lab
- ECE 418 – Image and Video Processing