

JONATHAN XUE

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EDUCATION

- Fall 2018-Present **University Of Illinois At Urbana-Champaign, Computer Science**, Urbana-Champaign, IL
- Pursuing a Bachelor Of Science In Computer Science
 - James Scholar, Campus Honors Program

PROFESSIONAL/RESEARCH EXPERIENCE

- 06/2017-08/2017 **Research Intern, McCormick School Of Engineering, Northwestern University**, Evanston, IL
- Ran computer simulations to study the effect of nanoconfinement on the structural and transport properties of H₂O.
 - Wrote Python scripts to generate LAMMPS data files detailing the molecular composition/bonds of H₂O and Carbon Nanotubes.
 - Used Python, Tcl, and C++ to sanitize data and complete data analysis.

SELECTED PROJECTS

- Autumn 2017 **Watchdog**
- Facial recognition platform for classrooms built using Microsoft Cognitive Service.
 - Automates attendance and offers teachers live, in-depth analytics on the current state of a classroom by collecting continuous data on student emotions.
 - Lists the IDs of students with the highest engagement scores, which is calculated through a combination of their attentiveness and positive emotions.
- Summer 2017 **Caveat**
- Chicago crime data is retrieved from the Chicago Data Portal and stored in MongoDB. Crimes are classified under standard categories (assault, theft, etc.) and are respectively assigned a weight.
 - Node.js Express Server sends data to clients of a list of crimes within a certain radius. Analytics are then calculated and displayed through: a heat map of crime intensity/severity, a pi-chart detailing the occurrence rates of various crime categories, and a graph showing crime rates over time.
- Spring 2017 **Exterminat0r**
- A first-person shooter virtual reality game. Consists of two gamemodes: arcade and survival. In arcade mode, the user has sixty seconds to shoot as many static blocks as possible. In survival mode, the user is placed in a custom map against infinite waves of enemy spawns. Motions are controlled via an X-Box Controller.

LEADERSHIP, PROFESSIONAL ACTIVITIES AND AWARDS

- CodeDay Chicago 2017: Best Application, Best Overall
 - Hackridge 2017: 3rd Place, American Eagle's Choice, Best Domain Name
 - Code For The Kingdom – Chicago 2017: Best Pre-Existing Project
 - MHacks X: Qualtrics Best Use Of Data Visualization
 - Huskie Hacks – Health & Wellness 2017: Green Livin'
 - Revolution UC VII: Best High School Hack
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- CodeDay Chicago 2018: Mentor
 - Illinois Junior Academy Of Science: State Student Executive Board

COMPUTER SKILLS

Languages: C, C++, HTML/CSS, Java, Javascript, Python, Tcl

Database and Client/Server Technologies: AWS, Firebase, Google Cloud, MongoDB, Node.js

Integrated Development Environments: Android Studio, Arduino, Atom, Cloud9, Eclipse, PyCharm, Visual Studio

Software: Adobe Photoshop, Adobe Illustrator, Autodesk Inventor, Autodesk Maya. Microsoft Excel