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

PROFESSIONAL/RESEARCH EXPERIENCE

06/2018-08/2018 **Volunteer, FreeGeek Chicago,** Chicago, IL

- Deconstruct electronic devices into its core materials for waste recycling.
- Unit test hardware components (RAM, hard drives, graphics cards, etc.) to ensure functionality.
- Build Linux-based systems out of donated and recycled parts.

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 H_2O.
- Wrote Python scripts to generate LAMMPS data files detailing the molecular composition/bonds of H_2O 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

- 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 Illustrator, Adobe Photoshop, Autodesk Inventor, Autodesk Maya. Microsoft Excel