JONATHAN XUE

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EDUCATION

May 2021 **Bachelor Of Science, Computer Science** – University Of Illinois At Urbana-Champaign

- GPA: 3.97

EXPERIENCE

06/2019-08/2019 **Capital One** – Software Engineering Intern

- Developed a web application to organize data labeling for machine learning solutions using React.js + Redux with a Python Flask server. Raw datasets are uploaded, annotated, and exported in both raw (JSON) and parsed (CSV, TSV, CoNLL) formats for different training models.
- Built and implemented a separate text annotation module optimized for performance and stability.
- Stored users, datasets, and the corresponding annotations in a PostgreSQL database.

11/2018-05/2019 **CME Group** – Robotic Process Automation Intern

- Architected digital worker to automate employee termination/resignation processes. Tasks include disabling the employee account from the Active Directory, terminating VPN/Remote-Desktop access, disabling access to remote web tools and business applications, and removing the account from email and distribution lists.
- Used C# .NET to parse emails to retrieve necessary employee identification information (employee id, email, full name).

09/2018-12/2018 **University Of Illinois At Urbana Champaign** – Research Assistant

- Analyze and accommodate test dependencies in regression testing algorithms, namely test prioritization, test parallelization, and test selection.
- Developed two separate Maven plugins to automate the process of accommodating dependent tests.
- Use of the work is 7.1% faster at producing reliable outcomes than regression testing algorithms which assume test independence.

SELECTED PROJECTS

Roomify *https://jonathanxue.com/roomify*

- Built a web application that helps individuals find and create listings for subleases within a designated area using React.js + Redux with a Node.js Express server.
- Utilized Google Firebase to authenticate users via Facebook, Google, and standard login/registration.
- Stored user and listings data in a MongoDB database hosted on MongoAtlas.

Stud-Vision *https://devpost.com/software/stud_vision*

- Developed a mobile application that enhances student learning by parsing textual/visual content and providing corresponding information (3D models, links) on relevant concepts.
- Used Python in Blender to generate 3D chemical models of elements/compounds and Vuforia to sync the corresponding models to physical textbook pages in augmented reality.
- Used Google Firebase's ML Kit and Rapid Automatic Keyword Extraction (RAKE) natural language processing algorithm to parse and extract keywords from textual images.

Watchdog *https://devpost.com/software/watchdog-gtz0p8*

- Employed Microsoft Azure's Cognitive Services Platform to develop a facial/emotional recognition website for educational applications within a classroom setting.
- Automates attendance and offers teachers live in-depth analytics regarding the current state of their classroom by continuously collecting data on student emotions. Used Chart.js to display student trends over time.

RELEVANT COURSEWORK

CS 225 – Data Structures
CS 233 – Computer Architecture
CS 361 – Probability & Statistics For Computer Science
CS 374 – Intro To Algorithms & Models Of Computing
CS 498RK – Art Of Web Programming

SKILLS

Languages: C, C++, HTML/CSS, Java, JavaScript, Python
Database and Client/Server Technologies: Express, MongoDB, Node.js, PostgreSQL, SQLite
Libraries/Frameworks: Flutter, React.js, React Native