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# ROICE LIU

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## Education

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<b>Wisconsin, WI</b>	<b>University of Wisconsin-Madison</b>	<b>Sept 2016 - May2020</b>
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- **Majors:** Computer Engineering, B.S.E & Computer Science, B.S (in major GPA: 3.55)
- **Programing Coursework:** Networks, Algorithms & Data Structure, Operating system, Intro.Machine learning
- **Engineering Coursework:** Digital System, Circuits, microprocessor systems, Computer Architecture

## Employment

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<b>Scrum Master &amp; Software Engineer, PT</b>	<b>Birdwell Solutions</b>	<b>Mar 2020 - Now</b>
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Software service(<https://birdwellsolutions.com/>) : contracted software customization

- Developed the official website by designing UI & UX and implementing the entire front-end with React.
- Increased sprint efficiency by 8% by planning out Jira agile schedule and conducting routinely check in on teams.
- Designed mobile and web product Myxr by creating workflow & UI prototypes with Figma.
- Leveraged knowledge in Git, Jira agile management and Figma prototyping tool, programmed with React, Javascript, ES6, css.

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<b>Venture Resident, Contract</b>	<b>Gener8tor</b>	<b>July 2020 - Sept 2020</b>
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Resident for 5-week startup incubator program which creates a new startup every week (<https://www.gener8tor.com/>)

- Gained traction from 2nd week of startup creation, and product is referenced by strangers through word of mouth.
- Built websites for products and attracted users, which led to business cooperation with Madison local business.

## Software Projects

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### Android Augmented-Reality app

- Enabled user data storage and retrieval by implementing local storage route and remote storage through JSON.
- Implemented 2D AR dynamic text panel by using AR Core. (Java, Android).

### React Meme Generator website

- Developed a website based program to generate memes by incorporating meme API (React, Javascript).

### Network Flow Control

- Implemented algorithm between routers and switches to forward and receive data packets. (Java)
- Optimized the routing mechanism with RIPv2 and routing table. (Java)
- Added DNS server to trace and receive data packets from the destined server.(Java)
- Ensured data transmission through implementing simple sliding window protocol (SWP) with 3-way handshake mechanism. (Python)

### Classifier with Machine Learning

- Implemented the recognizer of handwritten numbers through 2-layered neural network with back-propagation algorithm.
- Developed a classifier of movie's comments from IMDb to recognize its "negative" or "positive" sentiment by using Naive Bayes classification. (Java)

### Operating System related

- Implemented a multi-level priority queue in xv6's kernel.
- Created new system calls in the kernel to handle different requests.
- Implemented a file system checker to detect possible error and inconsistency. (C, Linux)

## Skills

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**Software:** (*proficient*) Java, HTML/CSS, javascript, ES6,react (*familiar*): C, python, JSON, Android