

Athena (Xiaohe) LIU

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SUMMARY

- Ph. D. student in Engineering, seeking internship opportunity in web development or software engineering starting June 2019.
- Focused JavaScript developer, with confidence in object oriented programming and various frameworks, with demonstrated skills in full stack web application development.
- Independent, self-motivated, always eager to learn and implement new technologies to make life better.
- Experience working in team environment and coordinating tasks among team members.

EDUCATION

- **Udemy & FreeCodeCamp** Online Learning
Certificates *April 2018 - Present*
 - **Courses:** Responsive Web Design Certification, The Web Developer Bootcamp, JavaScript Algorithms and Data Structures, The Ultimate MySQL Bootcamp, Modern React with Redux
- **University of British Columbia** Vancouver, BC
Ph.D. in Mechanical Engineering - Thermofluids *Sept 2017 - Present*
- **Brown University** Providence, RI, U.S.A.
Ma.Sc. in Engineering *Sept 2015 - May 2017*
 - **Courses:** Numerical Solution of Partial Differential Equations, Scientific Programming in C++

PROGRAMMING SKILLS

- **Programming Languages:** JavaScript (ES5, ES6, ES7), Python, HTML, CSS, SQL, C, C++
- **Libraries & Frameworks:** React.js, Redux, Node.js, Express.js, jQuery, Semantic UI, Bootstrap
- **Databases:** MySQL, MongoDB
- **Others:** Git, MATLAB, Unix Shell, \LaTeX

TECHNICAL PROJECTS

- **百字本 (100-Letter) Baizi Journal App** *Jan 2019 - Present*
Self-Initiated Project
 - Designed and developed a minimalist journal app which prompts user to write a journal with 100 Chinese characters exact every day. I initiated this project based on my journaling habit for the past 10 years, and by developing this app, I aim to share this fun journal format with the world.
 - Reached out to a senior developer and collaborated on backend development, built a REST API with Node.js, Express.js and MongoDB, featuring JWT authentication and NoSQL schema.
 - Independently developed the frontend with React.js and Redux, implemented routing using React Router, and implemented data services using Axios and Redux Thunk.
 - Manage deployment to XRCloud in China.

- **YelpCamp App**
Course Project *Nov 2018*
 - Developed a full-stack yelp-like web app for sharing and discovering new campgrounds using Node.js, Express.js, MongoDB and Bootstrap; deployed to Heroku.
 - Designed data schema for users, campgrounds and comments; applied data association using Mongoose.
 - Implemented user authentication and authorization using Passport.js.
- **Computational Modeling of High Speed Jet Impingement**
Research Project *June - Oct 2018*
 - Developed numerical procedures in C using an open source software named *Basilisk*, to simulate high speed liquid jet impingement on a moving surface, providing physical insight to the phenomena that was not observable through experiments.
 - Used supercomputing and MPI parallel algorithm to accelerate the computation, reducing the runtime by 99%.

WORK EXPERIENCE

- **Lead Teaching Assistant** Vancouver, BC
Department of Mechanical Engineering, UBC *Jan 2018 - Present*
 - Create and teach tutorials for 3rd year undergraduate students on the subject of data analysis (MECH 305/306). Tutorial lectures include hands-on data analysis with MATLAB and white board explanation on statistics concepts and textbook problems.
 - Coordinate with 2 professors and 7 other TAs throughout the term to ensure that the tutorial materials are complementary to the rest of the course. Deliver 6 hours of lectures to a class of 20-50 people every other week for 10 weeks.
 - First taught this tutorial in 2018 and was invited to teach again as lead TA in 2019 thanks to the good feedbacks from the students and instructors.
- **Administrative Intern** Shanghai, China
InnoSpace Startup Incubator *March - June 2015*
 - Coordinated among 20+ onsite web-oriented startup teams, the administrative staff and external investors, to ensure projects stayed on schedule and stakeholders were informed of project status.
 - Provided administrative support including front-desk reception, schedule management, event planning and social media marketing.

OTHER SKILLS & INTERESTS

- **Languages** : English (Fluent), Mandarin (Native), French (Conversational), Japanese (Basic)
- **Interests**: Historical Rapier Fencing, Origami, Stamp Carving