

# Shuhao Dong

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## Education

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**University of Waterloo**, M.Eng. in Electrical and Computer Engineering Sept. 2023 – Apr. 2025

- GPA: 82/100
- **Coursework:** Algorithm Design and Analysis, Methods and Tools for Software Engineering, Foundations of Software Engineering, Computer Security, Data Analysis

**University of Toronto**, H.B.Sc. in Computer Science Sept. 2019 – Jun. 2023

- GPA: 3.74/4.0 (High Distinction, Transcript)
- **Coursework:** Software Design, Data Structures and Analysis, Operating Systems, Web Programming, Software Engineering, Databases, Theory of Computation, Computer Networks, Scalable Computing, Computer Organization, Computational Complexity and Computability, Algebraic Cryptography, Groups and Symmetries

## Experience

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**Head Teaching Assistant**, University of Toronto – Mississauga, ON Jan. 2021 – Apr. 2023

- Organized lab sessions, proctored tests, and assigned grades to assignments, tests, and examinations
- Assisted in the development and maintenance of course material, websites and its related systems
- Designed and developed unit tests for the batch grading of weekly labs and assignments
- Developed an email distribution system to automatically deliver test results to students enrolled in the course

**Peer Facilitator**, University of Toronto – Mississauga, ON Sept. 2020 – Dec. 2020

- Collaborated with faculty to support students enrolled in the first-year university calculus course
- Created and coordinated activity plans, including study note exchange, peer discussions and examination prep

## Publications

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**Object Oriented Programming Exercises for CS2 Courses: Urban Forestry Theme** May 2023

Sonya Allin, Ilir Dema, Oluwagbotemi Iseoluwa, *Shuhao Dong*, Tingting Zhu

DOI: 10.1145/3593342.3593347

## Projects

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**iOS Task Management App with LLMs** App Store

- Led the development of a native iOS voice-powered To-do list app through Agile and DevOps process
- Utilized AI to break down tasks into actionable steps and provide customizable organizing options
- Released on App Store and TestFlight with CI/CD pipeline, integrated user feedback to enhance stability
- Tools Used: Swift, Firebase

**Self-Management App for Spinal Cord Injury** Project Report

- Partly supported by a grant from the Canadian Institutes for Health Research (Susan Jaglal, PI)
- Designed and developed a cross-platform mobile app using React Native and Flask to support mindfulness practices and provide a comprehensive information catalog for individuals with spinal cord injuries (SCI)
- Conducted an interdisciplinary research study and achieved positive feedback for app performance and functionality, demonstrating its effectiveness in improving quality of life for SCI users
- Tools Used: React Native, Flask, MongoDB

## Technologies

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Python, Java, C/C++, Swift, JavaScript, TypeScript, Node.js, jQuery, SQL, HTML, CSS, Django, Flask, React, Next.js, MySQL, MariaDB, Postgres, MongoDB, Firebase, Cassandra, Redis, Nginx, Apache, TCP/IP, BGP, HTTP/2, WebSocket, Git, Docker, RESTful API, Cloud Native, Serverless, CI/CD, Azure, AWS, GCP, RISC/MIPS