Shu Ze (Wayne) Chen

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EDUCATION

University of Michigan, Ann Arbor   8/2024 – 4/2028
Bachelor of Science in Engineering | Courses: ENGR 100, ENGR 101, ENGR 110, MATH 116, ALA 104
Michigan Research and Discovery Scholars, the Residential Affiliation of UROP

TFS - Canada's International School   9/2012 – 6/2024
IB Advanced Bilingual Diploma, Ontario High School Diploma | 4.0 GPA (97+%)
- SAT Scores: Math 790 | Reading & Writing 750
- Higher-Level Courses: Economics (7), Math A&A (6), Physics (6)
- Standard-Level Courses: Chemistry (6), French L&L (6), English L&L (7), Computer Science

EXPERIENCE

Student Innovator | *The Knowledge Society (TKS)*   6/2023 – 6/2024
- Built a 98% accurate brain-computer interface implementing AI software to detect early tumour symptoms among aphasic patients and elderly through brain activity; created a physical prototype, website and software.
- Top 5 Finalists among 4000 competitors. Presented project to Y-Combinator, VCs, and TKS Alumni.

Research Assistant | *York University*   8/2021 – 6/2023
- Collaborated alongside 2 undergraduate students to investigate how pore diameter in graphene sheets affects water permeability in saltwater filtration. Collected data and presented results in symposium.
- Researched the molecular dynamics and chemical properties of functionalized graphene sheets using VMD simulations to achieve optimal desalination.

Assistant Math Teacher | *Spirit of Math Schools*   8/2021 – 6/2023
- Formulated creative weekly lessons to ensure 40+ students (Grades 4-7) of all learning needs comprehend advanced mathematical concepts through personalized one-on-one guidance in a classroom setting.
- Tutored students age 9-13 with problem-solving & quick thinking through timed math drills & homework.

SHAD Research Fellow | *Carleton University*   7/2023
- Selected as one of 60 from 2000 students for a month-long summer STEM workshop.
- Led team of 10 to create a smart alert system that uses neural networks to predict household behavior and ease daily tasks for the elderly with dementia.
- Created and presented a website, app, physical prototype and business plan to entrepreneurs.

Data Management & AI Intern | *PwC Canada*   6/2022
- Admitted as one of 12 from 500 students through a selective early internship program at a competitive school.
- Collaborated with Lead AI and Data Scientists to analyze large datasets and improve the internal structure and workflow of PwC by processing data into simplified graphs for clients using Tableau & Power BI.
- Completed a month-long internship presenting data findings to Managing Directors & advocating the use of AI to accelerate deliverables for clients.

PROJECTS AND AWARDS

University of Toronto's Rotman Commerce Market Research   10/2023
- Conducted market research for a proposed sports-betting platform named "House of Sports" integrating social media services to engage enthusiasts, surveying online sports-betting competitors to identify key UI patterns.
- Earned Top 4 Finalist among 200 in University of Toronto's Rotman Commerce Boardroom Competition.

TFS Academic Award, High School Academic Achievements   9/2019 – 9/2022
- **Scholar's Guild:** Awarded to students with the highest overall average in the class. Received for three years.
- **Excellence Award:** Student with the highest overall mark in the entire grade for the subject, received for academic performance in Math, Computer Science, and Science.
- **Honour Award:** Student with the second highest mark in the entire grade for the subject, received for academic performance in Economics HL, Math HL, French, Biology, and English.

SKILLS

Languages: French, English, Mandarin | **Technical:** Java, JavaScript, MATLAB, C, Xcode, Github, ReactJS, TailwindCSS, HTML, Firebase, Microsoft Office