

# Wayne (Shu Ze) Chen

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## EDUCATION

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### Toronto French School - Canada's International School

Expected 6/2024

IB Advanced Bilingual Diploma, Ontario High School Diploma | 4.0 GPA (97+%) | SAT 1540

- Higher-Level Coursework: Math A&A, Physics, Economics
- Standard-Level Coursework: Chemistry, French L&L, English L&L, Computer Science

**Skills:** French, English, Mandarin, Java, Xcode, Github, ReactJS, TailwindCSS, HTML, Firebase, Microsoft

## EXPERIENCE

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### Innovator & Entrepreneur | *The Knowledge Society (TKS)*

6/2023 – Present

- Explore emerging technologies to combat the world's alarming issues from maternal mortality to cancer genetics. Writing a Medium article on the medical applications of AI / silica-infused programmable materials.
- Engineering a brain-computer interface implementing AI/ML software to detect early symptoms among aphasic patients and elderly through brain activity; creating a physical prototype, website and AI software.
- Network and Showcase projects to Y-Combinator, Venture Capitalist and TKS Alumni.

### Research Assistant | *York University* | <https://tinyurl.com/FiltrationResearch>

8/2021 – 6/2023

- Collaborated with 2 undergraduate students to investigate how pore diameter and applied pressure in graphene sheets affect water permeability and salt rejection in saltwater filtration.
- Researched the molecular dynamics and chemical properties of functionalized graphene sheets using VMD simulations (LAMMPS and C++) to achieve optimal desalination.

### Assistant Teacher | *Spirit of Math*

8/2021 – 6/2023

- Formulated creative weekly lessons to ensure 40+ students of all learning needs comprehend advanced mathematical concepts through personalized one-on-one guidance in a classroom setting.
- Tutored students ages 9-13 with problem-solving & quick thinking through timed math drills & homework.

### SHAD Fellow | *Carleton University* | <https://waynechen4.wixsite.com/smarthome>

7/2023

- Selected as one of 60 from 2000 students for a 1-month STEM workshop, invited to be a SHAD ambassador.
- Led team to create a smart alert system that uses AI and Machine Learning to prevent forgetfulness among Canadians, particularly to combat dementia among the elderly.
- 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 and Power BI.
- Completed a month-long internship presenting data findings to Managing Directors & advocating the use of AI to accelerate due diligence and valuations for clients.

## LEADERSHIP & COMMUNITY INVOLVEMENT

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### Technology and Innovation Prefect | *Toronto French School*

9/2022 – Present

- Student Head of STEM at school for 2 years, lead and collaborate with Student Prefects and Head Faculty in weekly meetings to promote Tech programs to 500+ students through STEM clubs and competitions.
- Prepare educational videos regarding STEM opportunities, news and events for the entire school student body.
- Partner regularly with the Director of Innovation and Technology to implement educational initiatives.

### Head of Homework Club and Peer Mentoring | *Toronto French School*

9/2022 – Present

- Apply my academic knowledge in mentoring young learners to develop their mathematical ability, language proficiency and logical thinking in French and English across all subjects.
- Guide 20+ students to develop fundamental studying and learning skills
- Assign students mentors to specific mentees depending on their educational needs and support.

## **Head of Model UN Club | Toronto French School**

9/2022 – Present

- Provide one-on-one guidance to 30+ students regarding their MUN debating, mannerisms and diplomatic writing during bi-weekly sessions.
- Compete in major international conferences with 800+ participants using public speaking, communication and critical thinking skills to form blocks and write cohesive resolution papers.
- Conduct research on recent international news to compose research papers.

## **PROJECTS**

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### **Family Memories Portal | <https://github.com/WayneSzchenTFS/Family-Memories-Portal>**

- Created an iOS application using Swift that allows family members to connect by connecting their phones and sharing family memories in the form of personal messages.
- Integrated Firebase Authentication to verify the user's account, and implemented Firebase Storage and Firestore as the back-end for data management and images.

### **SoleSwap Business Plan | <https://tinyurl.com/SoleSwapESB>**

- Launched a proposed shoe sole company that allows customers to easily switch-out soles on their shoes to suit various occasions and needs while being eco-friendly and financially affordable.
- Advanced to DECA Provincials in the Start-Up Business Plan Event for Entrepreneurship.
- Compiled research on the finance, pollution and aesthetic design of traditional shoe competitors to target specific demographics, predict optimal revenue streams and propose possible marketing strategies/channels.

### **House of Sports Canada Market Research | <https://tinyurl.com/HouseOfSportsCanada>**

- Conducted market research for a proposed sports-betting platform integrating social media services to promote betting among young enthusiasts.
- Earned Top 4 Finalist in University of Toronto's Rotman Commerce Boardroom Competition.
- Analyzed Canadian government gambling statistics and surveyed online sports-betting competitors to identify key UI patterns and specific market demographics within the E-sports & traditional sports sector.

## **AWARDS AND ACHIEVEMENTS**

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### **The French National Brevet Diploma, France's Minister of National Education**

9/2021

- Received the "Très Bien" distinction (highest possible distinction)

### **3 x Scholar's Guild, TFS Academic Award**

9/2019 – 9/2022

- Awarded to top 10 students with the highest overall average in the entire grade for 3 consecutive years

### **Prix d'excellence (Excellence Award), TFS Academic Award**

9/2019 – 9/2023

- Awarded to the student with the highest overall mark in the entire grade for the subject
- Received for academic performance in Math, Computer Science, Science, History and Spanish

### **Prix de persévérance (Perseverance Award), TFS Academic Award**

9/2019 – 9/2023

- Awarded to the student with the largest mark improvement throughout the year in the grade for the subject
- Received for academic performance in Science, History, English, Geography, Visual Arts and Music

### **Prix d'honneur (Honour Award), TFS Academic Award**

9/2019 – 9/2023

- Awarded to the student with the second-highest overall mark in the entire grade for the subject
- Received for academic performance in Economics HL, Math HL, French, Biology, English, Leadership

### **Grade 8 Piano Exam, Royal Conservatory of Music**

8/2020

- First Class Honours for Practical Exam & First Class Honours with Distinction for Theory Exam