

About

I am a PhD Candidate in Human-Computer Interaction at the University of Melbourne, specialising in mobile sensing and artificial intelligence. With a strong interest and expertise in large language models, multimedia, and understanding user behaviour, I am eager to apply my skills to diverse and challenging real-world projects.

Education

2022 – **PhD, Human-Computer Interaction**, *The University of Melbourne*, Australia.

present **Thesis:** Enhancing Smartphone Sensing Through Screen Text

Supervisors: Prof. Vassilis Kostakos, Dr. Simon D'Alfonso

Skills: Mobile Sensing, Natural Language Processing, Large Language Models, Data Analysis, User Studies

2019 – 2022 **Bachelor of Science (Honours), Computer Science**, *The University of Auckland*, New Zealand.

Dissertation: Evaluating the Effectiveness of Responsive Visualisation within a Breathing Application

Grade: First Class Honours

Publications

- 2024 Tianyi Zhang, **Songyan Teng**, Hong Jia, and Simon D'Alfonso. Leveraging LLMs to Predict Affective States via Smartphone Sensor Features. In *Companion of the 2024 ACM International Joint Conference on Pervasive and Ubiquitous Computing*, UbiComp Companion '24. ACM, October 2024.
- 2024 **Songyan Teng**, Tianyi Zhang, Simon D'Alfonso, and Vassilis Kostakos. Predicting Affective States from Screen Text Sentiment. In *Companion of the 2024 ACM International Joint Conference on Pervasive and Ubiquitous Computing*, UbiComp Companion '24. ACM, October 2024.
- 2024 **Songyan Teng**, Simon D'Alfonso, and Vassilis Kostakos. A Tool for Capturing Smartphone Screen Text. In *Proceedings of the 2024 CHI Conference on Human Factors in Computing Systems*, CHI '24. ACM, May 2024.
- 2024 **Songyan Teng**, Simon D'Alfonso, and Vassilis Kostakos. *Understanding User Behavior in the Wild Using Smartphones*, page 1–26. Springer Nature Switzerland, December 2024.
- 2024 Johnny Chan and **Songyan Teng**. The Design and Implementation of PAGE: Personalised Assessment Generative Engine. *Pacific Journal of Technology Enhanced Learning*, volume 6, page 33–46. Auckland University of Technology (AUT) Library, December 2024.

Research and Technical Experience

2025 **Research Intern (Incoming)**, Dolby, Australia.

Generating personalised multimodal (audio, video, textual) experiences using smartphone sensor data. Developing and deploying machine learning models for adaptive multimedia generation. Exploring how multimodal feedback can support health.

2024 – **Research Assistant**, *Emotion Regulation through Music Generation*, The University of Melbourne, Australia.

Developing a Spotify-based web application to generate playlists based on user moods. Exploring how custom playlists can shift users between affective states.

- 2024 **Research Assistant**, *Smartphone Sensing and Wellbeing*, The University of Melbourne, Australia.
Investigated how smartphone usage can serve as a predictor of health and wellbeing. Implemented AI and machine learning techniques to analyse data correlations and identify patterns.
- 2023 – 2024 **Research Assistant**, *Exploring Generative AI in Education*, The University of Auckland, New Zealand.
Developed a tool to automatically create versioned assessments. Researching methods to generate dataset variations using synthetic data. Coordinated team members to achieve project outcomes.
- 2021 – 2022 **Software Engineer Intern**, *Serato*, Auckland, New Zealand.
Created web applications to support product delivery and manage transactions. Implemented a web-based music visualiser application.
- 2021 **Project Manager**, *Course Development: Introductory Business Analytics*, The University of Auckland, New Zealand.
Led the creation of the University of Auckland course: Introductory Business Analytics. Researched and organised content in developing an introductory course for all students within the Business Analytics major.
- 2021 **Software Developer**, *SYQEL*, Boulder, United States.
Created responsive music visualisers according to audio input. Researched and implemented efficient methods for constructing visualisers.
- 2020 – 2021 **Research Scholar**, *Cognitive Engagement and Debugging*, The University of Auckland, New Zealand.
Conducted user studies to collect data for analysing program debugging behaviour. Created data analysis tools to deduce patterns and identify behaviours beneficial to the debugging process. Communicated research results via oral presentations and written reports.

Teaching Experience

The University of Melbourne

- 2025 – present **INFO20005: User Interface Development**, Tutor.
- 2024 – present **COMP90059: Introduction to Programming**, Tutor.
- 2023 – present **COMP10003: Media Computation**, Head Tutor.
- 2023 – 2024 **COMP90018: Mobile Computing Systems Programming**, Head Tutor.
- 2023 – 2024 **INFO10003: Fundamental of Interaction Design**, Head Tutor.

The University of Auckland

- 2022 – 2023 **BUSAN 201: Data Management**, Course Coordinator.
- 2021 – 2022 **BUSAN 300: Data Wrangling**, Course Coordinator.
- 2021 – 2022 **INFOMGMT 192: Information Tools for Business**, Tutor.
- 2021 **INFOSYS 222: Database Systems**, Tutor.

Leadership and Volunteering

- 2024 **Web Chair**, *ACM UbiComp Conference*, Melbourne, Australia.
Creating, maintaining, and updating the website to present information about the conference. Meeting with the committee to plan conference events and scheduling.
- 2024 **Web Chair**, *ACM MobileHCI Conference*, Melbourne, Australia.
Creating, maintaining, and updating the website to present information about the conference. Meeting with the committee to plan conference events and scheduling.

- 2023 – 2024 **Seminar Coordinator**, *Human-Computer Interaction Group*, The University of Melbourne, Australia.
Organising weekly HCI-themed seminars. Communicating about seminar requirements with internal and external speakers. Providing technical assistance and facilitating seminar sessions.
- 2023 – 2024 **Communications Officer**, *Computing and Information Systems Graduate Research Student Group*, The University of Melbourne, Australia.
Welcoming new graduate research students to the faculty. Meeting with the committee to plan student events and scheduling. Sending announcements about student events.
- 2023 **Website and Registration Coordinator**, *Computing and Information Systems Doctoral Colloquium*, The University of Melbourne, Australia.
Created, maintained, and updated the website to present information about the colloquium. Promoted the colloquium via social channels.

Skills

Programming Languages	Python, Java, C#
Web Technologies	HTML, CSS, JavaScript, PHP, React, Vue.js, Node.js, Three.js
Database	SQL, MongoDB, Database Design
Other	Large Language Models, Artificial Intelligence, Natural Language Processing, Git

Awards

- 2024 **Google Australia Research Day Travel Scholarship**, *Google*, Australia.
- 2022 **Research Training Program Scholarship**, *The University of Melbourne*, Australia.
- 2022 **Senior Scholar Award**, *The University of Auckland*, New Zealand.
- 2021 **Postgraduate Honours Scholarship**, *The University of Auckland*, New Zealand.