XIUGE CHEN

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ACADEMIC QUALIFICATIONS

Master of Science (Computer Science) - University of Melbourne, Australia **2018.07 - NOW**

- GPA: H1 or 91/100

Bachelor of Science (Biological Science) - Nanjing University, China **2014.09 - 2018.06**

- Minor in Finance
- GPA: 4.52/5.00 or 3.81/4.00 or 90/100 • Rank: top 10%

WORK EXPERIENCE

Research Assistant - ***University of Melbourne, Australia*** **2020.07 - NOW**

Research project: *Detecting Cognitive Biases with Biophysical Sensors to Battle Misinformation*

Tutor / Demonstrator - University of Melbourne, Australia **2019.02 - NOW**

Subjects: Database Systems (INFO20003), Computer Systems (COMP30023),
Declarative Programming (COMP90048)

Software Engineer Intern - Optiver, Australia **2019.11 - 2020.02**

- Develop low-latency systems that supports daily trading and research, including fetching data from market link, data verification, and feeding data to downstream auto-trading bots.
- Participate in D1 auto-trading competition with other interns and win the first place in stress tests.
- Key skills: C++, Python, low-latency systems, Linux/Unix, Git, Gtest/Gmock, Bamboo, CMake, JIRA

Software Engineer Intern - Huawei Technologies Co., China **2018.12 - 2019.01**

- Develop efficient remuneration calculation subsystem for the China Mobile, including using new data representation, changing execution logic, adding caching and multithreading, and perform unit testing.
- Key skills: Groovy, OracleSQL, Sprint Boot, Maven, JUnit, SVN, Jenkins

RESEARCH EXPERIENCE

Theoretical Computer Science Group, University of Melbourne, Australia **2020.03 - NOW**

Approximation Algorithms for Streamed Sparse Graphs **(Master Thesis)**

Supervisor: Professor Tony Wirth Collaborate with Dr Rajesh Chitnis (University of Birmingham)

- Design space-efficient algorithms to approximate graph quantities (e.g. domination and independence number) for streaming sparse graphs, mathematically prove their correctness and tightness.

Human-Computer Interaction Group, University of Melbourne, Australia **2018.10 - NOW**

Detecting Cognitive Biases with Biophysical Sensors to Battle Misinformation

Supervisor: Dr. Tilman Dingler

- Build machine-learning models to help detect the presence of confirmation biases and cognitive dissonance during news consumption, using biophysical data such as eye gaze and fNIR.

Investigating Reading Behavior on Electronic Devices

Supervisor: Dr. Tilman Dingler Sponsored by Adobe Research (Documents Intelligence Lab)

- Evaluate users' reading behavior when reading deeply or skimming on various digital devices. Build machine-learning models to predict users' reading behavior based on gaze data.

Using Ubiquitous Sensing to Detect Episodes of Hand-washing

Supervisor: Professor Vassilis Kostakos

- Build machine-learning models to accurately classify steps of hand-washing (suggested by WHO).

Other Projects

Methylation Modification and Gene Expression in Tumor Cells Supervisor: Professor Jing Wang

- Statistically analysis the correlation between promoter methylation and gene expression.

Mmdecoder Supervisor: Professor Ian Korf

- Develop a simple HMM to annotate the genetic origins of a mouse strain.

PUBLICATION

- Wang, C., Sarsenbayeva, Z., Chen, X., Dingler, T., Goncalves, J. and Kostakos, V., 2020. Accurate Measurement of Handwash Quality Using Sensor Armbands: Instrument Validation Study. *JMIR mHealth and uHealth*, *8*(3), p.e17001.

AWARDS

- Outstanding Graduate (2018, equivalent to *summa cum laude*)
- People's Scholarship (2014-2017, top 10%)

ADDITIONAL INFORMATION

School/Personal Projects:

- Python: Tweets geolocation and authorship recognition; Multi-armed bandits; AI planning algorithms
- Java: Distributed shared graphic application; Advanced/Streaming data structures and algorithms;
- C: Password cracker; 15-puzzle solver; Simplified web server.
- Haskell: a complier for a LL(1) language

Activities: Leadership Club (Vice President), Student Union (Minister), School Basketball Team

Languages: Chinese (Native), English (Fluent, TOEFL: 109/120, GRE: 170+155)