Sidong Feng

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RESEARCH INTERESTS

User interface design, understanding, programming and testing

EDUCATION

- **Monash University** — Melbourne, AU
  Philosophy of Doctor; Full Scholarship — *Jan. 2023 -*

- **Australian National University** — Canberra, AU
  Bachelor of Software Engineering (Honors) — *Feb. 2016 – Dec. 2019*

EXPERIENCE

- **University of Science and Technology of China** — Suzhou, CN
  Research Assistant Intern — *Jun 2022 - Present*
  - **App testing**: Develop an intelligent way based on UI understanding to help developers for app testing.

- **Alibaba Group** — Hangzhou, CN
  Research Intern — *Aug 2020 - Feb 2021*
  - **Code generation for icon designs**: Develop machine-learning and deep-learning based techniques to generate readable and efficient code for icons from the design artifacts.
  - **UI layout grouping**: Develop a heuristic-based recursive traversing algorithm to infer the association relationship between UI elements.

- **National University of Singapore (NUS) Research Institute** — Suzhou, CN
  Research Intern — *Apr 2020 - Aug 2020*
  - **Real-time water pollution**: Propose a fast scene parsing model mounted on self-driving UAV for segmenting algae region and measuring water pollution.
  - **Practice for student past exams**: Propose a text-shape-recognized segmentation model to remove the handwritten answers from the past exam papers.

- **Yisheng Leju Company** — Suzhou, CN
  UI Developer Intern — *Nov 2018 - Feb 2019*
  - **Interface Design**: Designed the product application, guidelines and UI specification.
  - **Human-Computer Interaction**: Repeatedly elicited users' feedback about experiences with prototyped design.
  - **Bug Testing**: Profiled, troubleshot and fixed bugs for the high-volume internal web application.
  - **System Improvement**: Improved code readability and performance by reviewing the quality of code.

- **Civilise.ai** — Canberra, AU
  Software Developer Intern — *Jul 2018 - Nov 2018*
  - **Data Preprocessing**: Developed CV modules to detect regions of change in satellite images at different time.
  - **Deep Learning**: Built a convolutional neural network to classify regions of change, and achieves 92% accuracy.
  - **Data Visualization**: Performed GIS operations on heatmap to cluster high concentration of property revolution.
  - **Software Documentation**: Constructed concise burndown chart, user story map, risk register and decision log.

- **OK RDY** — Canberra, AU
  Software Developer Intern — *Feb 2018 - Jul 2018*
  - **Mobile Application**: Designed interface and implemented functionalities (malicious reporting, message system)
  - **Bugs Testing**: Applied Jira for bug tracking, led team to fix bugs through unit test in mentor-matching app.

- **China Life** — Suzhou, CN
  Software Developer Intern — *Nov 2017 - Feb 2018*
  - **Software Management**: Responsible for debugging and repairing coding issues for application.
  - **Cross-browser Compatibility**: Re-factored functionalities and CSS for websites to ensure compatibility.

- **Building and Construction Council** — Suzhou, CN
  Civil Analyst Intern — *Nov 2016 - Feb 2017*
  - **Building Coordination**: Assisted miscellaneous projects as assigned to insure a successful boutique opening.
  - **Progress Report**: Provided status reports to senior management to keep them apprised of progress.

PUBLICATIONS

Journal Papers:
- **S. Feng**, M. Jiang, T. Zhou, Y. Zhen, C. Chen. "Auto-Icon+: An Automated End-to-End Code Generation Tool for Icon Designs in UI Development", [**TiiS 2022**]

Conference Papers:
- M. Xie, Z. Xing, **S. Feng**, C. Chen, L. Zhu, X. Xu. "Psychologically-Inspired, Unsupervised Inference of Perceptual Groups of GUI Widgets from GUI Images", [**ESEC/FSE 2022 (CORE-A)**]
- **S. Feng**, C. Chen. "GIFdroid: Automated Replay of Visual Bug Reports for Android Apps", [**ICSE 2022 (CORE-A)**]
- **S. Feng**, S. Ma, J. Yu, T. Zhou, Y. Zhen. "Auto-icon: An Automated Code Generation Tool for Icon Designs Assisting In UI Development", [**Highlights in IUI 2021 (CORE-B)**].
- C. Chen, **S. Feng**, Z. Liu, Z. Xing, S. Zhao. "From Lost to Found: Discover Missing UI Design Semantics through Recovering Missing Tags", [**CSCW 2020 (CORE-A)**].
- **S. Feng**. "Dynamic Facial Stress Recognition in Temporal Convolutional Network", [**ICONIP 2019 (CORE-A)**], in conjunction with ANU Bio-inspired Computing conference [**ABCs 2019**].
- C. Chen, **S. Feng**, Z. Xing, L. Liu, S. Zhao, J. Wang. "Gallery D.C.: Design Search and Knowledge Discovery through Auto-created GUI Component Gallery", [**CSCW 2019 (CORE-A)**].

Short Papers:
- **S. Feng**, C. Chen. "GIFdroid: An Automated Light-weight Tool for Replaying Visual Bug Reports", [**ICSE 2022 (CORE-A)**].
- **S. Feng**, C. Chen, Z. Xing. "Gallery D.C.: Auto-created GUI Component Gallery for Design Search and Knowledge Discovery", [**ICSE 2022 (CORE-A)**].
- M. Xie, **S. Feng**, Z. Xing, J. Chen, C. Chen. "UIED: a hybrid tool for GUI element detection", [**ESEC/FSE 2020 (CORE-A)**].

SERVICES

- Junior PC in MSR 2023
- External reviewer in CHI 2023
- External reviewer in MobileHCI 2022
- Student volunteer in ASE 2021
- Selected panelist in ESEC/FSE 2020

AWARDS

- Selected Fully Funded PhD for Summer School in Computer Science and AI (ISAAC) [at Monash]
- Selected Alibaba Global Talent Development Program [at Alibaba]
- Top solution in AI project of Smart City in Suzhou park (obtained $120,000 project investment). [at NUSRI]
- Selected Engineers Australia (EA) for graduates [at ANU]
- Top 5 Award in Innovation ACT 2018 (with $8,750 grant). [at Civilise.ai]
- Commercial cooperation with the Queanbeyan council, NSW, Australia. [at Civilise.ai]
- "Start-up of the Year" award in the Digital Canberra iAwards 2018. [at OK RDY]
- 1st student graduated from high school [at BMGS high school].
- Top 20% in Australian CommonWealth Mathematics Competition [at BMGS high school].

ASSISTIVE TEACHING

Co-supervisor in "Summer vacation research program" [at Monash]	*2022*
Co-supervisor in FIT4003 "Software engineering research project" [at Monash]	*2022*
Co-supervisor in FIT4441 "Honours degree project" [at Monash]	*2022*
Co-supervisor in FIT3144 "Advanced computer science research project" [at Monash]	*2022*
Co-supervisor in FIT3170 "Software engineering practice" [at Monash]	*2021*

PERSONAL

- Paper art design, Certified skydiver, SSI water diver, Amateur Go rank 2 dan