

# Tian Tan

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## EDUCATION

<b>University of Arizona</b> , Tucson, AZ, U.S.	Aug. 2024 - Present
• <b>Ph.D.</b> in Computer Science, <b>Research: Example selection &amp; prompt optimization for LLMs</b>	GPA: 4.0/4.0
<b>Boston University</b> , Boston, MA, U.S.	Sep. 2021 - Jan. 2023
• <b>M.S.</b> in Electrical and Computer Engineering	GPA: 3.76/4.0
<b>Macau University of Science and Technology</b> , Macau, China	Sep. 2017 - Jun. 2021
• <b>B.S.</b> in Computer Technology and Application, <b>First Class Honors</b>	GPA: 3.68/4.0 (Top 2%)

## SKILLS

**Programming:** Python, MATLAB, Java, SQL, C/C++, HTML, JavaScript, LaTeX

**Data Science:** Pandas, Numpy, Matplotlib, Sklearn, Folium, PyTorch, TensorFlow

**Software:** Sublime, PyCharm, VS Code, Eclipse, Dev-C++, Jupyter Notebook, Anaconda, Git, Vim, Shell, Overleaf

**Languages:** Mandarin, Cantonese, English (IELTS score 7/9: Listening: 7, Reading: 9, Writing: 6, Speaking: 6)

## WORK EXPERIENCE

<b>Graduate Teaching Assistant</b> , University of Arizona, AZ, U.S.	Jan. 2025 - Present
<i>Advisor: Prof. Chicheng Zhang, CSC 380 Principles of Data Science</i>	
• Supported students in building interactive data visualizations with JavaScript and D3.js library.	
<b>Graduate Teaching Assistant</b> , University of Arizona, AZ, U.S.	Aug. 2024 - Dec. 2024
<i>Advisor: Prof. Joshua A. Levine, CSC 444 Data Visualization</i>	
• Hosted office hours on data science and ML topics; co-developed Python-based assignments and exams.	
<b>Full Stack Engineer</b> , Glint Tech Solutions, TX, U.S.	Oct. 2023 - Jun. 2024
• Tailored IT solutions for clients and formulated project plans and schedules with team members.	
• Empowered clients by conducting thorough research and data analysis to deliver valuable insights on trends.	
<b>Social Media Data Analyst</b> , Boston USWOO Realty LLC, MA, U.S.	Aug. 2023 - Jan. 2024
• Analyzed social media data to discover user psychological preferences and developed products interactively.	
• Harnessed artificial intelligence to create or optimize advertisements for product promotion.	
<b>Teaching Assistant</b> , Boston University, MA, U.S.	Jan. 2022 - May 2022
<i>Advisor: Prof. Prakash Ishwar, EC 414 Introduction to Machine Learning</i>	
• Implemented machine learning algorithms in MATLAB and held weekly discussion sessions.	
<b>Electrical Engineer Intern</b> , Han's Laser Technology Industry Group Co., Ltd., China	Jul. 2019 - Aug. 2019
• Designed 3D printed models of mechanical parts and tested 3D printing slicing software.	
<b>Pre-sales Assistant Engineer Intern</b> , Tencent Cloud Co., Ltd., China	Jun. 2019 - Jul. 2019
• Contributed to the development of the first smart healthcare system in Changsha city.	
• Completed industrial data statistics, demand boundary management, and product designing.	

## PUBLICATIONS

- Kan Ni, Subrota Kumar Mondal, HM Dipu Kabir, **Tian Tan**, Hong-Ning Dai.  
Toward security quantification of serverless computing  
*Journal of Cloud Computing*, 2024.
- Subrota Kumar Mondal\*, **Tian Tan\***, Sadia Khanam, Keshav Kumar, Hussain Mohammed Dipu Kabir, Kan Ni.  
Security Quantification of Container-Technology-Driven E-Government Systems  
*Electronics*, 2023.
- Subrota Kumar Mondal, Rui Pan, H M Dipu Kabir, **Tan Tian**, [Hong-Ning Dai](#).  
Kubernetes in IT Administration and Serverless Computing: An empirical study and research challenges  
*The Journal of Supercomputing*, 2022.

**Note:** \* above denotes equal contribution.

## RESEARCH EXPERIENCE

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### **Boston University Bio-Imaging & Informatics Lab**

Mar. 2023 - Jul. 2023 & Jan. 2022 - Jun. 2022

*Research Assistant, Advisor: Prof. Bang-Bon Koo*

- Developed a reinforcement learning-based bee swarm optimization method for feature selection on high-dimensional medical datasets (~800 features).
- Constructed end-to-end pipelines to model relationships between MRI diffusion metrics and cognitive scores; predicted brain age via global-local transformer networks in PyTorch.
- Automated large-scale neuroimaging workflows (HCP) with shell scripts and integrated data from sources like UK Biobank for structural and diffusion analysis.
- Established ML models for Alzheimer's diagnostics using co-training with SVM and UMAP-based visualization, achieving near state-of-the-art accuracy on regression tasks.

### **Macau University of Science and Technology**

Sep. 2020 - Jun. 2021

*Research Assistant, Advisor: Prof. Subrota Kumar Mondal*

- Worked on intelligent system framework design and e-governance security improvements in smart cities.
- Proposed a novel security quantification method and introduced a new intelligent system architecture, a container-driven e-government system.
- Published two articles and my thesis was awarded as one of the best papers in the college.

### **UC Berkeley School of Information**

Jun. 2020 - Aug. 2020

*Remote Research Intern, Advisor: Prof. Noah Gift*

- Topic: Cloud Computing for Data Analysis
- Deployed AI techniques to recognize handwritten information and submitted a project abstract.

### **Macau University of Science and Technology**

Jan. 2019 - Jun. 2019

*Research Assistant, Advisor: Prof. Zhiyao Liang*

- Topic: How to Utilize Artificial Intelligence in Social Life
- Investigated the use of reinforcement learning to balance an inverted pendulum on a flying drone.
- Led a team in a modeling competition to optimize smart urban traffic systems using artificial intelligence.

## HONORS AND AWARDS

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- Provincial Second Prize, 2019 China Undergraduate Mathematical Contest in Modeling (CUMCM).
- Excellence Award, The Stanford CGCP Student Writing Contest.
- 3rd Class China Regional Award, RoboMaster 2018 Robotics Competition.
- First Prize, China Adolescents Science & Technology Innovation Contest (CASTIC).
- Chairman Award of China Association for Science and Technology, CASTIC.
- Grand Prize, The "CST CUP" National Scientific Literacy Competition.
- Provincial Bronze Medal, World Mathematics Olympiad (China region).
- International Silver Award, World Robot Olympiad (WRO).
- Second Place, The 7th Changsha Sports Games Tennis Competition.
- Excellent Volunteer, Macau Youth Artistic Ability Volunteer Association.

## ACTIVITIES

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### **Volunteer, Chinese Red Cross**

Jul. 2016 - Jul. 2021

- Participated in many volunteer activities and community service to provide support to those in need.

### **Volunteer & Deputy Director, Macau Youth Artistic Ability Volunteer Association**

Sep. 2018 - Sep. 2020

- Organized volunteer activities and served as a volunteer teacher in a rural primary school ([News Video](#)).

### **Journalist, Changsha Evening News**

Mar. 2009 - Jul. 2020

- Wrote and published articles about social issues, such as educational equality, human rights, etc.

### **Deputy Director, Department of Finance, Tennis Club**

Sep. 2017 - Jun. 2019

- Managed and supervised the financial funds and organized tennis charity events.

### **Director & Screenwriter, "Dream Market" - HD Short Film**

Jan. 2018 - Dec. 2018

- Received the Excellence Award in the 2018 Campus English Short Film Competition.