

Tian Tan

[Website](#) | [LinkedIn](#) | [GitHub](#)

EDUCATION

| | |
|---|---------------|
| Boston University , Boston, MA | Jan. 2023 |
| • M.S. in Electrical and Computer Engineering | GPA: 3.76/4.0 |
| Macau University of Science and Technology , Macau | Jun. 2021 |
| • B.S. in Computer Technology and Application, First Class Honors | GPA: 3.68/4.0 |

RESEARCH INTERESTS

Data Science, Machine Learning, Human-computer Interaction, Natural Language Processing

RESEARCH EXPERIENCE

| | |
|--|-----------------------|
| Boston University Bio-Imaging & Informatics Lab | Mar. 2023 - Jul. 2023 |
| <i>Research Assistant, Advisor: Prof. Bang-Bon Koo</i> | |
| • Constructed a pipeline for data science and regression models to help medical staff mine potential relationships between diffusion magnetic resonance imaging (MRI) measures and cognitive scores. | |
| Boston University Bio-Imaging & Informatics Lab | Jan. 2022 - Jun. 2022 |
| <i>Research Assistant, Advisor: Prof. Bang-Bon Koo</i> | |
| • Established machine learning models for early diagnosis of Alzheimer's disease. | |
| • Implemented dimensionality reduction and feature selection to find connections in multi-modal datasets. | |
| Macau University of Science and Technology | Sep. 2020 - Jun. 2021 |
| <i>Research Assistant, Advisor: Prof. Subrota Kumar Mondal</i> | |
| • Worked on serverless computing, container technology, and security quantification. | |
| • Published two articles and my thesis was awarded as one of the best papers in the academy. | |
| UC Berkeley School of Information | Jun. 2020 - Aug. 2020 |
| <i>Remote Research Intern, Advisor: Prof. Noah Gift</i> | |
| • Topic: Cloud Computing for Data Analysis | |
| • Submitted a project abstract and it was accepted for presentation at the 2nd VSIP conference (First Author). | |
| Macau University of Science and Technology | Jan. 2019 - Jun. 2019 |
| <i>Research Assistant, Advisor: Prof. Zhiyao Liang</i> | |
| • Topic: Reinforcement Learning for Balancing a Flying Inverted Pendulum | |
| Hunan Academy of Agricultural Sciences | May 2015 - Jan. 2017 |
| <i>Research Assistant, Advisor: Dr. Lifeng Wang, Consultant: Dr. Longping Yuan (National Academy of Sciences member)</i> | |
| • Topic: How to Reduce Pesticide Residues in Vegetables | |
| • Won a national award and was presented it by the Vice President and the Minister of Science and Technology. | |

PUBLICATIONS

- 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.
- Tian Tan**, Xuepin Ma, Jun Liu, Zuren Li. Photocatalytic Degradation of Residual Orthene in Vegetables by Nano-TiO₂ *China Science & Technology Education*, 2017.
- Tian Tan**. An Analysis on Canceling the Division of Liberal Arts and Sciences in the College Entrance Examination *Culture And History Vision (Theory)*, 2016.

- **Tian Tan**, Ruiming Zhou
Thoughts on Reform of China's Personal Income Tax System
Modern SOE Research, 2016.

Note: * above denotes equal contribution

WORK EXPERIENCE

Social Media Analyst Intern, Boston USWOO Realty LLC, MA Aug. 2023 - Present

- Analyzed social media data to discover user psychological preferences and developed products interactively.
- Conducted media promotion and product marketing, such as poster design, copywriting and page layout, etc.

Teaching Assistant, EC 414 Introduction to Machine Learning Jan. 2022 - May 2022

Advisor: Prof. Prakash Ishwar, Boston University College of Engineering

- Implemented machine learning algorithms in MATLAB and took charge of the office hour.

Electrical Engineer Intern, 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.

Pre-sales Assistant Engineer Intern, Tencent Cloud Co., Ltd., China Jun. 2019 - Jul. 2019

- Participated in the bidding of Changsha Urban Smart Medicine Program.
- Completed industrial data statistics, demand boundary management, and product designing.

PROJECTS

Apple iCloud Project: Encrypted Search over FoundationDB Sep. 2022 - Dec. 2022

- Created a client side interface for the FoundationDB database to support encrypted search.
- Deployed the program on a multi-node cluster and compare performance between encrypted search algorithms.

Amazon Movie Review for Rating Prediction (Kaggle Competition | Top 10%) Oct. 2022 - Nov. 2022

- Executed One-Hot Encoding for categorical features and analyzed text by TF-IDF algorithm.
- Engineered regression models and tuned hyper-parameters with GridSearchCV method.

SKILLS

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

Programming: Python, MATLAB, Java, SQL, C++, LaTeX **Data Science:** Pandas, Numpy, Matplotlib, Sklearn, Folium

Software: Sublime, PyCharm, Visual Studio, Eclipse, Dev-C++, Jupyter Notebook, Anaconda, Git, Vim, Shell, Overleaf

CERTIFICATIONS AND AWARDS

- '[Database Administration Fundamentals](#)' and '[Programming using Java](#)' certified by Microsoft.
- '[Data Security](#)' certified by Collaborative Institutional Training Initiative (CITI).
- '[Artificial Intelligence](#)' certified by Huawei Cloud.
- Provincial Second Prize, 2019 China Undergraduate Mathematical Contest in Modeling (CUMCM).
- 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.
- 3rd Class China Regional Award, RoboMaster 2018 Robotics Competition.
- Silver Award, World Robot Olympiad (WRO).

ACTIVITIES

Volunteer, Chinese Red Cross Jul. 2016 - Jul. 2021

- Participated in many volunteer activities to provide services 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 articles about social issues, such as the examination system, educational equality, human rights, etc.

Director & Screenwriter, "Dream Market" - HD Short Film Jan. 2018 - Dec. 2018

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