Sirui Tao

dylantao.github.io | linkedin.com/in/siruitao | github.com/dylantao | dylantaosirui@gmail.com

PROFILE

I am a rising senior at UCSD, double majoring in Data Science and Probability & Statistics, minoring in Economics. I have industry experience designing Data-centric MLOps solutions for Manufacturing applications and automating data analysis and visualization pipelines. My research investigates how to enable ML models with an intuitive human-like 3D physical understanding for various downstream tasks in domains including autonomous driving, robotics, design, and architecture.

EDUCATION

University of California, San Diego

La Jolla, San Diego, CA, USA

B.S. Data Science & B.S. Probability and Statistics, Minor in Economics — Sep 2019 - Mar 2023

GPA: *3.94 Major* | *3.82 Overall*

Honors & Awards: *Provost Honor*. 19 Fall - 22 Win | *HDSI Scholarship*. 21 Win - 21 Fall | *AEP TRELS Scholarship*. 20 Spr, 22 Win | *Data Science Student Representative*. 21 Fall - Present | *Mentor Collective Mentor*. 21 Fall - Present

EXPERIENCE

Tesla, Inc.

Fremont, California, USA

Data Scientist Intern — June 2022 - Sep 2022

- Work on Statistical Process Control Tools and Data-centric Visual Inspection MLOps System in Global Battery Manufacturing Team.

Bühler Group

Wuxi, Jiangsu, China

Data Scientist Intern at Innovation Center — July 2021 - Sep 2021

- Research and initiate the effort to build an Image-Labeling MLOps feature in our B2B product prototype to optimize the model adaptability for defects detection for a 25-billion USD customer segment;
- Prototype an MVP using Figma & Angular within a cross-functional innovation team;
- Director of Innovation praised the initiative and requested a showcase of this proposal to the whole division;
- Refine and participate in reviewing new analytics features on our IoT platforms to help our customers with their digital twin adaptation journey with better business insight extraction with descriptive & predictive modeling.

J.D. Power

Jingan, Shanghai, China

Analyst Intern — June 2021 - July 2021

- Optimize the workflow of the quality analytics team by refining the analytics processes via automating data processing and report pipelines, saving more than 200 working hours/ year for the team;
- Provide detailed documentation on Git to ensure continuous usage for teammates from non-technical backgrounds.

UCSD, CogTools Lab

UCSD, La Jolla, San Diego, CA, USA

Assistant Researcher — Jan 2021 - Present

- Receive funding from HDSI and TRELS to participate in research on 3D data under PI Judith Fan's mentorship to study intuitive physics, investigating visual perception in humans and machines, primarily working on the data analysis and 3D stimulus designs non-rigid physical interactions for Physion (*NeurIPS 2021*).

Bosch

Wuxi, Jiangsu, China

Data Analyst Intern at MAS (Manufacturing Analytics Solution) — Aug 2020 - Nov 2020

- Provide effective data analysis and visualization on Tableau for continuous monitoring of data and parameter tuning to gain valuable analytic insights based on the Bosch Industry 4.0 transformation roadmap;
- Cutting down manual inspection and analysis time by providing crucial insight on key bottlenecks and reducing critical bottlenecks diagnosing time by 80% in manufacturing lines with insights on potential optimal parameters;
- Present the dashboards to the Director of Manufacturing Analytics Solution Division at the monthly briefing.

Publication

- *Bear, D., *Wang, E., *Mrowca, D., *Binder, F., Tung, H.-Y., RT, P, Holdaway, C., **Tao, S.**, Smith, K., Sun, F.-Y., Li, F.-F., Kanwisher, N., Tenenbaum, J., **Yamins, D., and **Fan, J. (2021). Physion: Evaluating physical prediction from vision in humans and machines. (***NeurIPS 2021 Datasets & Benchmarks Track***).

Skills

Tools: Python, R, SQL, C#, Java, JS, HTML, CSS, PyTorch, Julia **|** Pandas, Scikit-learn, Numpy, Tableau, Angular, AWS, Dask, Spark, PostgreSQL, D3.js, Databricks, Figma

Data Science Concepts: Data Science Life Cycle, Data Visualization, Scalable Analytics, Optimization, Web Scraping & API, Regression, Classification, MLOps, Recommender system, Data Mining, Database Management, Relational Algebra

Software Engineering Concepts: Algorithms and complexity, Data structures, Graph theory, Regex, DevOps, Responsible AI, Product Development & Management, User-centric design, Scalable and Parallel computing, Cloud computing, ML/ DL systems & tools

Project Management Concepts: Stakeholders analysis, Risk management, Budgeting, Communication & Documentation, Project management life cycle & methodologies (Agile), Organizational structure & culture, Data-driven continuous improvement frameworks, Team Development & Management

Mathematics Concepts: Probabilistic reasoning, Combinatorics, Discrete & Continuous probability, Stochastic process, Linear algebra, Statistics Modeling, Hypothesis testing, Computational Statistics, Descriptive & Inferential statistics, Monte Carlo simulation, Tree-based algorithms, Random Walk, Parametric & Nonparametric test

Economics Concepts: Micro & Macro Economics, Behavioral Economics, Game Theory, Financial Theory, Portfolio Theory, Financial Statement Analysis, Financial Performance Analysis, Corporate Finance, Option Trading

Domain-Specific Concepts: IoT, Blockchain Economics

Certificates

Google Data Analytics Specialization

Google Project Management Specialization

Organizational Change and Culture for Adopting Google Cloud Specialization

Google Cloud Digital Leader Training Specialization

Finance & Quantitative Modeling for Analysts Specialization

Akuna Capital Options 101 **|** ***Akuna Capital Options 201***