

# Sirui Tao

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## EDUCATION

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2019 - 2023

### University of California, San Diego

B.S. Data Science & B.S. Probability and Statistics, Minor in Economics

- 3.94 Major GPA | 3.82 Overall GPA

## HONORS & AWARDS

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2019 - 2022

*Provost Honor, Warren College, UCSD*

2021 -

*Data Science Student Representative, HDSI, UCSD*

2020 - 2021

*HDSI Research Scholarship, HDSI, UCSD*

20 Spr, 22 Win

*TRELS Research Scholarship, AEP, UCSD*

## PUBLICATION

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2021

\*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. In Advances in Neural Information Processing Systems (NeurIPS Datasets & Benchmarks Track) 2021.

## ACADEMIC EXPERIENCE

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2021 -

### 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 data analysis and 3D stimulus designs for non-rigid physical interactions.

2020

### UCSD, Academic Enrichment Program

UCSD, La Jolla, San Diego, CA, USA

*Independent Researcher*

Mar 2020 - Aug 2020

- Receive grants to study the potential economic benefit and risks of adopting the "Farm-Institution" model for campus food supply at UCSD through a qualitative and quantitative assessment of UC San Diego's current situation, encouraging UCSD to make an effort to transform into a sustainable public institution.

## WORKING EXPERIENCE

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2022	<b>Tesla</b> <i>Data Scientist Intern</i>	Fremont, California, USA June 2022 - Sep 2022
	<ul style="list-style-type: none"><li>• Build and deploy end-to-end process-agnostic advanced Statistical Process Control &amp; Quality Disposition tools with automatic alert systems; continuously monitor &amp; improve based on user feedback from the process engineering team;</li><li>• Conduct data analyses on various datasets to identify root cause &amp; validate model performance;</li><li>• Investigate better lossless image compression solutions, saving 15~30% of theoretically annual image storage.</li></ul>	
2021	<b>Bühler Group</b> <i>Data Scientist Intern at Innovation Center</i>	Wuxi, Jiangsu, China July 2021 - Sep 2021
	<ul style="list-style-type: none"><li>• 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;</li><li>• Prototype an MVP using Figma &amp; Angular within a cross-functional innovation team;</li><li>• Director of Innovation praised the initiative and requested a showcase of this proposal to the whole division;</li><li>• 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 &amp; predictive modeling.</li></ul>	
2021	<b>J.D. Power</b> <i>Analyst Intern</i>	Shanghai, China June 2021 - July 2021
	<ul style="list-style-type: none"><li>• 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;</li><li>• Provide detailed documentation on Git to ensure continuous usage for teammates from non-technical backgrounds.</li></ul>	
2020	<b>Bosch</b> <i>Data Analyst Intern at MAS (Manufacturing Analytics Solution)</i>	Wuxi, Jiangsu, China Aug 2020 - Nov 2020
	<ul style="list-style-type: none"><li>• Provide effective data analysis and visualization on Tableau for continuous monitoring of data and parameter tuning to gain valuable analytic insights based on Bosch Industry 4.0 transformation roadmap;</li><li>• 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;</li><li>• Present the dashboards to the Director of Manufacturing Analytics Solution Division at the monthly briefing.</li></ul>	

## OTHER SKILLS

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Software:	Python, R, SQL, Web (Angular), D3.js, PyTorch, DevOps, Agile
Data Science:	Scalable Analytics, Data Visualization, MLOps, Recommender system, Data Mining
Mathematics:	Probabilistic reasoning, Descriptive & Inferential statistics, Stochastic process