

Winson Chen

(949)-232-4947 | winsonchen108@gmail.com | linkedin.com/in/Winson-Chen
github.com/Winson | scholar.google.com/Winson

EDUCATION

University of Minnesota, Twin Cities <i>Computer Science, Philosophy of Doctorate</i>	Minneapolis, MN <i>expect May 2030</i>
University of California, Santa Cruz <i>Scientific Computing and Applied Mathematics, Master of Science</i>	Santa Cruz, CA <i>June 2023</i>
University of California, Santa Cruz <i>Computer Science, Bachelor of Science, Cum laude</i>	Santa Cruz, CA <i>June 2022</i>
Irvine Valley College <i>Computer Science, Associate in Science, Cum laude</i>	Irvine, CA <i>Aug. 2020</i>

PUBLICATIONS

InfantAgent-Next: A Multimodal Generalist Agent for Automated Computer Interaction

NeurIPS'25

Bin Lei, Weitai Kang, Zijian Zhang, **Winson Chen**, Xi Xie, Shan Zuo, Mimi Xie, Ali Payani, Mingyi Hong, Yan Yan, Caiwen Ding

Active Listening: Personalized Question Generation in Open-Domain Social Conversation with User Model Based Prompting

EMNLP'24

Kevin Bowden, Fan Yue, **Winson Chen**, Wen Cui, Davan Harrison, Eric Xin Wang, Marilyn Walker

Early Experience with Transformer-Based Similarity Analysis for DataRaceBench

Correctness Workshop @ SC'22

Winson Chen, Tristan Vanderbruggen, Pei-Hung Lin, Chunhua Liao, Murali Emani

Aerial Vision-and-Dialog Navigation

ACL'23

Yue Fan, **Winson Chen**, Tongzhou Jiang, Chun Zhou, Yi Zhang, Eric Xin Wang

Athena 3.0: Personalized multimodal chatbot with neuro-symbolic dialogue generators

Alexa Prize SocialBot Grand Challenge 5 Proceedings

Yue Fan, Kevin K Bowden, Wen Cui, **Winson Chen**, Vrindavan Harrison, Angela Ramirez, Saaket Agashe, Xinyue Gabby Liu, Neha Pullabhotla, NQJ Bheemanpally, S Gard, M Walker, XE Wang

EXPERIENCE

Business Analyst / Full-Stack Engineer

Mar. 2024 – Apr. 2025

InfoIMAGE, Inc

Brisbane, CA

- Led a team of four in the design and development of an internal website, coordinating tasks, managing timelines, and ensuring successful project completion.
- Developed a new internal Core platform using Next.js and Flask, resulting in a 80% increase in data sample lookup
- Designed Core ORM by using SQLAlchemy, to increase development time by 20% and improve security
- Utilized RESTful API to facilitate front-end to back-end communication, improving data consistency by 50%
- Integrated AG-Grid to optimize the user experience resulting 15% increase in filtering and searching process

Machine Learning Engineer

Aug. 2022 – Sept. 2023

University of California, Santa Cruz / Amazon Alexa Prize

Santa Cruz, CA

- Reduced training time by 23% using LoRA and lightning package to fine-tune RedPajama 3B
- Enhanced system speed by 34% via AWS EC2 auto-scaling deployment of RESTful server with Red Pajamas 3B
- Increased 30% user ratings by fine-tuning RedPajamas 3B with dialog history for personalized questions
- Over three months, we achieved a 10% increase in user evaluations by implementing an APL (Alexa Presentation Language) detail template with text that auto-scrolls in sync with the voice-over
- Through the design and A/B testing of multiple variations of dialog managers and APL templates, we successfully attained a 13.5% improvement in satisfactory evaluations, striving to unveil the ultimate user experience

Data Scientist Intern

Jun. 2022 – Sept. 2022

Lawrence Livermore National Laboratory

Remote

- Designed web scraping pipeline using Scrapy's parallel process, improved 25% data collection
- Fine-tuned CodeBERT with DataRaceBench to adapt to parallel syntax in C/C++
- Optimized training speed by freezing hidden layers, reducing CodeBERT training time by 10%
- Set up a data pipeline to visualize SARS-CoV-2 Inhibitor for training a CNN in classification

ERIC Lab Assistant

Aug. 2021 – Sept. 2023

University of California, Santa Cruz

Santa Cruz, CA

- Received Amazon Alexa Prize Award to work on Alexa Prize SocialBot, TaskBot Challenge
- Collecting data with by simulating drone controller to create visual language navigation dataset
- Developed toolbox to help users to find published papers from Association for Computational Linguistics

Research Assistant

Aug. 2021 - Dec. 2021

University of California, Santa Cruz

Santa Cruz, CA

- Utilizing PySINDY package to fit the spatial-temporal data of drosophila genes using machine learning
- Experimenting various models to find the behavior of drosophila gap genes

TALKS

Early Experience with Transformer-Based Similarity Analysis for DataRaceBench

Dallas, Texas 11/18/2022

In-person talk at Correctness workshop at SC22

TEACHING

Graduate Teaching Assistant

Sept. 2022 - June 2023

University of California, Santa Cruz

Santa Cruz, CA

- MATH 19A (Calculus for Science, Engineering, and Mathematics)
- AM 10 (Mathematical Methods for Engineers I)
- AM 20 (Mathematical Methods for Engineers II)
- AM 214 (Applied Dynamical System)
- AM 250 (Intro to High-Performance Computing)

HONORS AND AWARDS

- Dean's Honor: Fall 2020, Spring 2021, Fall 2021, Winter 2022, Spring 2022
- Next Gen. SAM Scholar (Funded by National Science Foundation)

TECHNICAL SKILLS

Languages: Python, C, C++, CUDA/HIP(C++), SQL, JavaScript, HTML, CSS, Java

Frameworks: Flask, Django, PostgreSQL, React Native, jQuery, Bootstrap, Next.js

Developer Tools: Docker, Postman, Git, Jira

Libraries: PyTorch, TensorFlow, Pandas, NumPy, Matplotlib, Seaborn, Lightning, Gradio, Keras, BeautifulSoup, Scrapy, Selenium, OpenMP, MPI, OpenCV, Langchain, Streamlit, ChromaDB

Services : RESTful API, SLURM, AWS: SageMaker, S3, EC2