Xinru Jiang

Bachelor of Science, Dean s Honour List
Computer Science and Statistics
University of British Columbia, Vancouver

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 GitHub Link
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EDUCATION

- **University of British Columbia, Canada** *Sep 2020 - May 2024*
  Combined Major in Computer Science and Statistics, Deans Honour List, GPA:3.95/4.33
- **Fudan University, China** *Jul 2022 - Aug 2022*
  Summer Exchange. Courses: Artificial Intelligence, International Finance

AWARDS & ACHIEVEMENTS

- **UBC Vantage One Excellence Award** (4-year full scholarship, $0.23 million) *Sep 2020 - May 2024*
- **Gary Kusin Award for Women in Video Gaming** ($10000) *May 2024*
- **Mila AI4Good Lab Trainee Stipend** ($1000) *Jul 2023*
- **1st Place in British Columbia**, KPMG Metaverse Ideation and Innovation Challenge *Jan 2023*
- **Joseph Yu Global Leadership Award** ($2400) *Sep 2020*

PUBLICATIONS

- Lin Zhao, Hongxuan Li, Xuefei Ning, **Xinru Jiang**.
  THInImg: Cross-modal Steganography for Presenting Talking Heads in Images. In *the Winter Conference on Applications of Computer Vision (**WACV**)*, 2024.

  – Proposed `THInImg` model to conceal audio into identity image and then generate talking-head speech video, which can be effectively utilized for covert communication and transmission.

WORK EXPERIENCE

- **Stanford University** *Oct 2023 - Feb 2024*
  Software Development Research Assistant Remote

  – Developed R package `bpCausal` for a Bayesian Alternative to the Synthetic Control Method.
  – Visualized output. Wrapped Placebo tests. Implemented functions for MCMC diagnosis.

- **Tongdao Liepin Group** *Jul 2023 - Sep 2023*
  Data Analyst & Business Analyst Beijing, China

  – Discerned pivotal features influencing contract signings to adjust sales strategies by using `ML` models.
  – Simplified resume price calculation and reduced features for resume grade evaluation by utilizing `PCA` and `ML`.
  – Investigated factors contributing to non-contractual and non-receivable customers by scrutinizing communication data within the Customer Relationship Management system, reported strategic improvements.
  – Executed complex `SQL` queries on a comprehensive company data platform integrated with `Spark`, `Hive`, and `Octopus` on `Alibaba Cloud`, leveraging `Excel` and `Tableau` for data visualization.
  – Conducted insightful market analysis and actionable recommendations to amplify business revenue.

- **ByteDance** *Jul 2021 - Sep 2021*
  AI Education APP Backend and Platform Assistant Beijing, China

  – Directed the configuration of high school courses utilizing a Content Management System (CMS), facilitating the delivery of AI-based courses tailored to users mastery levels.
  – Collaborated with the product department to streamline CMS, contributing insightful suggestions to enhance the accessibility and efficiency.
  – Proactively identified and reported an issue in the CMS middle platform data sturcture, leading to a 50% reduction in departmental downtime following prompt resolution by the Research & Development team.

RESEARCH PROJECTS

•**UBC - Seeing Invisible Sounds: Towards a Visual Phonemic Language** *Sep 2023 - Present*
Research Volunteer, *Language & models used:* `Python`; `InfinityGAN`

  – Working with Professor Helge Rhodin, UBC student Olivia Perryman on a project to build an accessibility tool for translating audio into visual information, helping people with hearing impairments understand sounds.
  – Used `gradio` package to build user interface to visually display the project effect.

•**Mila - AI4Good: Gender Bias in Text-to-Image generative model Investigation** *Jun 2023 - Jul 2023*
Lab Trainee, *Language & models used:* `Python`; `Stable Diffusion, VQGAN+CLIP`

  – Evaluated and proposed solutions to mitigate the gender bias represented in Text-to-Image generative models.

•**UBC - Meta-humanoid: Social Interaction Effects of AR Avatar with Humanoid Robot** *Feb 2023 - Apr 2023*
Research Volunteer, *Language & tool used:* `C#`; `Unity`

  – Built a chatroom between Realistic AR Avatar and Humanoid Robot by using `Unity`.

SOFTWARE PROJECTS

•**Escape Phase (Adventure Game)** *Sep 2023 - Dec 2023*
Language & tools used: `C++`; `Tiled, CMake`

  – Developed an immersive adventure game using `C++`, incorporating Tiled for level design and `CMake` for project management. Applied multi-layer that some are invisible in single map and allowed players to switch layers.
  – Demonstrated proficiency in game development, including designing engaging game balance mechanics and integrating external tools for seamless project execution.

•**FeidgeGo (APP)** *Jan 2023 - Apr 2023*
Language & tools used: `Swift`; `SQLiteStudio, SwiftUI, Xcode`

  – Developed this app using `SwiftUI`, built, tested and debugged the entire app and used `Xcode`'s Interface Builder to create Storyboard to visually represent the iOS app user interface.
  – Optimized and built the framework for regular reminders, calendar management, food lists.
  – Created and cleaned recipe and food database by using `SqliteStudio`.

LEADERSHIP

•**China-Canada Youth Forum** *Sep 2021*
Main Organizer and Head of Events Department

  – Communicated and worked with the sponsorship department to ensure that approximately 600,000 RMB cost of the forum was covered by the sponsors, such as BMO and Peropure.
  – Planned events, contacted the choreography team to achieve the expected lighting and background effects.
  – Ensured that the invited guests came to the stage on time for their speeches and the events of the forum went on properly and achieved the aim of building a bridge for cultural exchanges, trends and opportunities in industry between China and Canada.

TEACHING

•**Tutor**

  – CS 9: Intermediate Python, University of California, Santa Barbara, *Spring 2024*
  – CAS MA 242: Linear Algebra, Boston University, *Fall 2023*
  – CPSC 121: Models of Computation, University of British Columbia, *Fall 2023*
  – MAST 10006: Calculus 2, The University of Melbourne, *Oct 2023*
  – MATH 11121/11711: Mathematical Foundations and Analysis/Probability, University of Manchester, *Aug 2023*
  – LLED 200/201: Writing in Academic and Professional Registers, University of British Columbia, *2021 - 2022*
  – SCIE 113: First-Year Seminar in Science, University of British Columbia, *2021 - 2022*
  – VANT 140: Content and Language Enrichment, University of British Columbia, *2021 - 2022*

SKILLS

Languages: Python, Julia, R, C, C++, Java, HTML, CSS, and Dr. Racket.
Other: Unity, MySQL, Gits, PhotoShop, Final Cut Pro, Photograph, and AIGC prompting.
Coursework: Data structures and algorithms, Object-oriented programming, Computer graphics, Applied machine Learning, Applied linear algebra, Artificial intelligence, Full stack development, Operating systems, Probability, Statistical learning, Video game programming, Experiment designing, Law and society, and etc.