

# DANNI LIU

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## EDUCATION

### Washington University in St. Louis

B.S. in Computer Science (Minor: Human-Computer Interaction)

Major GPA: 4.0/4.0; GPA: 4.0/4.0

St. Louis, MO

Sept. 2021 - May. 2023

### University of Washington

Major: Undeclared

GPA: 3.91/4.0

Seattle, WA

Sept. 2019 - March. 2021

Relevant coursework: Visualization, Cognitive Science, Human-Centered Design, Probability and Statistics, Data Structures and Algorithms, Object-Oriented Programming, Rapid Prototype Development

## PUBLICATION

Wang, Y.B.\*, Pan, F.ZH.\*, **Liu, D.N.\***, Hu, J.X.. Music-to-Facial Expressions: Emotion-Based Music Visualization for the Hearing Impaired. *The 13th Symposium on Educational Advances in Artificial Intelligence (EAAI-23)* (accepted)

## RESEARCH EXPERIENCE

### Visual Alchemist (funded by NSF Institute for Data Driven Dynamical Design (ID4))

Visual Data Analysis Group Washington University in St. Louis

*Undergraduate Research Assistant to Professor Alvitta Ottley*

St. Louis, MO

May. 2022 - Present

- Designed and developed a web-based visual analytic platform to aid and accelerate material design and discovery
- Integrated the visual interface with Google API services for a smooth transition to our services
- Incorporated features such as visual comparison of compositions and their syntheses for material design

### Human-Aware AI in Sound and Music

Future Laboratory of Tsinghua University

*Principle Member*

Beijing, China

March. 2022 - Jun. 2022

- Designed and implemented an emotion-based music visualization system which transformed audio music to avatar facial expressions to facilitate musical experiences for hearing-impaired users

### How Robot-Robot Contextual Behaviors Elicit Audiences' Narrative Descriptions

Future Laboratory of Tsinghua University

*Research Assistant to Professor Haipeng Mi*

Beijing, China

Jun. 2019 - Sept. 2019

- Investigated the effects of contextualized storytelling on the story comprehension and narrating ability of young children
- Created and administered a survey to 150+ participants to assess the visual components of the swarm robots to understand visual cues-emotion association

## WORK EXPERIENCE

### RealAI Technology Co., Ltd

*User Experience Intern*

Beijing, China

May. 2021 - Aug. 2021

- Identified market opportunities and user problems by synthesizing past research and conducting interviews with end-users, and presented key insights to executives to finalize design requirements
- Collaborated with design and engineering teams on product iterations based on usability tests, with over 90% of the user feedbacks successfully implemented as functions or resolved at the final releasing stage
- Launched AATP, an anti-adversarial playground for CV engineers to participate in security awareness training, with a team of four developers and one UI designer in two months

### Camia, Stand-alone Game Start-up (Ready for Beta Test)

*Co-founder and Developer*

China

Feb. 2021- Jun. 2021

- Finished the beta version of a commercial game consisting of game design, engineering, art and music in four months with a 12-person team
- Developed detailed product goals and a strategic plan to oversee the team's progress on design and development
- Built the game and implemented features including scene transitions, card shuffling and hit effects with Unity and C#

**Shanghai Qiyue Education Technology Co., Ltd***Software Development Engineer Intern*

Shanghai, China

Jul. 2020 - Aug. 2020

- Worked with a team of eight to build the Shanghai Senior High School Chemistry entrance examination system with a fully automated AI algorithm
- Developed the functionality of evaluating student's experimental operations and a database for teachers to manage student information and arrange test questions

**TEACHING EXPERIENCE**

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**Washington University in St. Louis, McKelvey School of Engineering**

St. Louis, MO

*Engineering Tutor*

Spring 2022 - Present

Courses: Introduction to Computer Science (CSE 131), Probability and Statistics for Engineering (ESE 326)

*Teaching Assistant*

Spring 2022 - Present

Courses: Logic and Discrete Mathematics (CSE 240), Data Structures and Algorithms (CSE 247), Introduction to Human-Centered Design (CSE 256)

**ADDITIONAL INFORMATION**

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**Computer skills**

Java, C++, Python, JS, React, Flask, D3, Plotly, InDesign, Figma, Photoshop, Adobe Premiere

**Languages**

Chinese Mandarin (Native), English (Proficient)

**SELECTED AWARDS AND HONORS**

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- Dean's Select Fellowship, Washington University in St. Louis 2022
- Dean's List, Washington University in St. Louis Fall 2021, Spring 2022
- Dean's List, University of Washington, Seattle Winter 2020, Spring 2020, Fall 2020, Winter 2021