

# YIYI (NANCY) SUN

New York, NY | Shenzhen, China

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## EDUCATION

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**New York University**, College of Arts and Sciences

[Expected] Dec. 2024

*Bachelor of Arts*

**Double Major in Math and Computer Science**, Major GPA: 3.8

**Minor in Music**

## PROJECTS AND RESEARCHES

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**Digitalization and Gamification of Doctor Approved Cognitive Exercises for Dementia Patients**

*DURF Research Grant Recipient*

Spring 2024 - Present

- Designed and implemented a set of visual and sound-based games in Unity, including word recognition, memory tests, drawing tasks, and pattern recognition, based on doctor-approved in-person cognitive assessments.
- Seeking to implement data storage for user performance metrics and ensure compatibility across different devices.

**Adversarially Robust Property-Preserving Hashing For Jaccard Distance**

Summer 2024

*Supervised Individual Research*

- Adapted and extended the construction of Gap-Hamming Distance from Robust Property-Preserving Hash Functions to preserve Jaccard Distance for sparse datasets.

**What's For Dinner: Discover and Share Recipes**

Spring 2023

*JavaScript, React, Express.js, MongoDB*

- Developed a web app with React and Express, providing recipe suggestions based on user's available ingredients and dietary preferences.
- Allows users to search, share, comment on, and rate recipes.
- Integrated TheMealDB and Spoonacular APIs and deployed on Digital Ocean.

**Robot Fingertips Position Estimation**

Fall 2022

*Python, PyTorch*

- Implemented supervised learning model to predict positions of fingertips on a robot hand with RGBD images.
- Computed dataset with lazy loading, used MSE Loss for training, and optimized ResNet-50 as the base model
- Achieved 99.5% localization accuracy and ranked top 15% with performance on Kaggle competition.

## OTHER EXPERIENCES

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**Game Jam: Ludum Dare 54 COMPO**

Oct. 2023

- Solo-developed a 2D platform game with all assets from scratch in 48 hours. Achieved final rank of 274.

**On Campus Jobs:** NYU Rock Wall Attendant, IT Support, Tutor for Basic Algorithm Class

## SKILLS

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**Languages:** Mandarin (*Native*), English (*Fluent*), Japanese (*JLPT-N2 167/180*)

**Programming Languages:** Java, C, C++, C#, Python, JavaScript, HTML/CSS

**Tools/Frameworks:** Unity, Blender, Procreate, Git, Docker, React, Node.js, MongoDB, Express.js