

Yuanhuan Deng

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EDUCATION

Brandeis University

M.S. in Computer Science (GPA: 3.6/4.0)

Courses: Data Structures, Database Management Systems, Operating Systems, Web Development

Waltham, MA

Aug. 2022 - Dec. 2024

Sun Yat-sen University

B.S. in Management (GPA: 3.9/4.0)

Guangzhou, CN

Sep. 2018 - June 2022

RESEARCH EXPERIENCE

Scalable Architecture Lab - College of William & Mary

Research Assistant, mentored by Prof. Yifan Sun

Remote

May 2024 - Present

- Assisted research projects on developing a flexible, high-performance, user-friendly computer architecture simulator engine to realize GPU performance visualization

Xu Lab - Carnegie Mellon University

Research Assistant, mentored by Dr. Xueying Zhan

Pittsburgh, PA

Mar 2024 - Present

- Implemented 3D tomogram visualization and a customizable denoising pipeline to enhance image quality with OpenCV. Designed algorithms for automated particle detection and center refinement which aimed to improve the accuracy and efficiency of structural analysis in cryoET data

The Heller School for Social Policy and Management - Brandeis University

Research Assistant, mentored by Dr. Eunjung Jee

Waltham, MA

June 2023 - Aug. 2023

- Developed a project that automates the conversion of handwritten survey results into electronic datasets which can be read by Stata, providing the datasets for 30+ economists and data scientists for research purposes
- Conducted the image-to-data solution from manual paper work to using OpenCV and PyTesseract, reduced the data conversion time by 90%, and achieved 95.8% accuracy rate in 5,831 pieces of data

Michtom School of Computer Science - Brandeis University

Research Assistant

Waltham, MA

Jan. 2023 - May. 2023

- Led and developed an interactive website independently to introduce a Python library (FairPy)
- Created the interactive front-end display utilizing HTML/CSS and Javascript
- Built a set of RESTful API with Express.js to handle Create, Read, Update, and Delete (CRUD) operations for user management service, using MongoDB as persistent storage
- Created user authorization, user authentication and secured user sessions facilitating JWT token

INTERNSHIP EXPERIENCE

Deloitte Consulting

Product Manager Intern

Shenzhen, CN

Nov. 2021 - Mar. 2022

- Compiled product requirement document for a new internal CRM system of a traditional bank
- Diagnosed the business demand of the bank by selecting 300+ requirements with MySQL and Python libraries
- Accomplished 12 trading scenarios optimization, which saved 28.4% weekly manual work time per staff member

TECHNICAL SKILLS

- Programming Language: Python, Java, JavaScript/TypeScript, SQL, HTML/CSS
- Frameworks: MERN (React.js, Node.js, Express.js, MongoDB), Bootstrap, Flask, Django
- Tools and Databases: AWS EC2, JUnit, PyTest, Postman, Grafana, MySQL, PostgreSQL, Blender