

# DANNI SHI

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## Education

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### University of Rochester

Aug. 2021 - Dec. 2022

*M.S. in Computer Science (GPA: 3.8/4.0)*

*Rochester, NY*

- Relevant courses: Collaborative Programming & Software Design, Computer Networks, Data Mining, Machine Learning

### Central South University

Sep. 2016 - Jun. 2020

*B.S. in Intelligence Science and Technology (with Honors)*

*Changsha, China*

- Relevant courses: Data Structure, Algorithm Analysis and Design, Database Systems, Principle of Operating Systems

## Professional Work Experience

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### Product Manager Intern

Mar. 2021 - Jul. 2021

*NIO, Inc. digital cockpit team*

*Shanghai, China*

- Worked closely with Developers, UX, and QA to design and lead features for the multi-display digital cockpit driving experience
- Learned how business priorities and engineering trade-offs need to be balanced in an agile, team-based environment
- Obtained experience working with Agile methodology and product-related mindset to be a more effective developer

### Undergraduate Research Assistant | Paper

Jul. 2019 - Jun. 2020

*Central South University*

*Changsha, China*

- Cleaned and preprocessed 66k+ entries of raw data collected from patients' IVF medical examination results using **Python**
- Predicted early pregnancy loss after IVF-ET with 97% accuracy by building multiple machine learning models with **scikit-learn**. Our best ML model is actively used by the Reproductive and Genetic Hospital of CITIC-Xiangya

## Relevant Project Experience

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### NADBenchmark Dataset Website | GitHub link

Oct. 2022 - Dec. 2022

- Designed solutions to redeveloped the old static websites consisting of HTML into a dynamic web-based application
- Developed clean and maintainable services using **Python** and **Flask** based on the product and frontend requirements
- Modeled and implemented the entire database schemas for the project with **MongoDB** and **AWS S3**
- Created RESTful APIs to support **CRUD** operations and other functionalities, and did unit testing with **Postman**

### Multi-vendor Restaurant Marketplace Website | GitHub link

August 2022

- Developed a full-stack online food-ordering system with **Django** and **PostgreSQL** for the backend, **HTML/CSS**, **Bootstrap**, and **JavaScript** for the frontend, and deployed it on **Linode** with **gunicorn** and **nginx**
- Implemented RESTful APIs with Python to support CRUD operations so that vendors can manage their menus
- Utilized **GeoDjango** and **Google Map APIs** to support showing nearby restaurants and location-based search
- Constructed **jQuery AJAX** widgets for features such as the shopping cart to render data in a more user-friendly way

### Command-Line To-Do App | GitHub link

June 2022

- Built command-line interfaces with **Typer CLI** in **Python** to take and process commands, options, and arguments
- Utilized **namedtuple** and **dictionaries** to handle the to-do data, and **JSON** files to manage persistent data storage
- Applied test-driven development by writing unit tests for every feature using **pytest** and Typer's **CliRunner**

### Distributed Version Control System in Rust

Oct. 2021 - Dec. 2021

- Designed and developed a fully functional DVCS in group using **Rust** and scored higher than **90%** students in class
- Handled writing and reading files operations by serializing and deserializing JSON data with Rust's SerDe framework
- Implemented interfaces for *clone*, *push*, and *pull* to transfer files by integrating Linux *rsync* commands into Rust code
- Created all the unit tests in Rust and integration tests in **shell** to troubleshoot the system and enhance error handling

## Technical Skills

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**Languages:** Python, JavaScript, Rust, SQL, HTML, CSS, Shell/Bash scripting, Matlab

**Frameworks & Libraries:** Django, Flask, jQuery, NumPy, Pandas, scikit-learn, OpenCV, PyTorch

**Database & Other:** MySQL, PostgreSQL, MongoDB, AWS, Postman, Git, Linux