Huiyue Zhou

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TECHNICAL SKILLS

Languages: Python, Java, JavaScript, C/C++, SQL, Perl, R
Front End: HTML/CSS, Angular, Sass, Redux, Next.js, Bootstrap, Ant.design, i18next, UIKit
Back End: MERN(MongoDB, Express, React, Node.js) Nest.js, PostgreSQL, MySQL, RESTful API, Spring Boot
Developer Tools/Testing: Git, Xcode, JUnit 5, Jest, Mocha, Chai, AWS: EC2, Ngnix, Vim, npm, TDD, Jira, Docker, TravisCI, Google Cloud Platform, VS Code, Visual Studio, PyCharm, IntelliJ, Eclipse
Libraries: pandas, NumPy, Matplotlib

EDUCATION

Georgia Institute of Technology GPA 4.0
Master of Science in Computer Science — *Jan. 2025 –*

University of Chinese Academy of Sciences
Master of Science in Bioinformatics and — *Sep. 2011 – Jun. 2015*

University of Chinese Academy of Sciences
Graduate Supplementary Program in Engineering and Technology Management — *Sep. 2011 – Jun. 2012*

Ocean University of China
Bachelor of Science in Biological Sciences — *Sep. 2007 – Jun. 2011*

EXPERIENCE

Research Assistant — Sep.2015 – Jun.2019
Beijing Institute of Genomics, Chinese Academy of Sciences (China National Center for Bioinformation)
- Led full-stack large-scale data workflows: from raw data ingestion to statistical analysis and report generation.
- Led a collaborative Exome-Wide Association Study (ExWAS) with Peking University First Hospital to investigate homocysteine (tHCY) levels in Chinese populations, published in *Frontiers in Genetics*.
- Assisted in establishing and managing a new bioinformatics research lab, handling grant applications, student management, and advancing research efforts.

Graduate Researcher — Sep. 2011 – Jun. 2015
Chinese Academy of Sciences, Beijing Institute of Life Science
- Conducted research on the distribution and evolutionary patterns of CRISPR in microbial communities under varying periodontal conditions, published in *Protein & Cell*.

Undergraduate Researcher — Sep. 2008 – Jun. 2011
Ocean University of China
- Led and completed SRTP research project at China Ocean University on calmodulin-binding proteins in Gracilaria lemaneiformis under heat shock conditions, published in *Marine Biotechnology*.

PROJECTS

Devoted Dogs Database | *Python, MySQL, PHP, Node.js, Angular, HTML/CSS, API, Git* Jan.2025 – Apri.2025
- Built a full-stack dog shelter management system with MySQL, Angular, PHP, and Node.js, featuring role-based access, user authentication, and dynamic dog/adoption/expense workflows.
- Implemented adoption logic, including application review, conditional eligibility rules, and automated fee calculation based on business conditions.
- Designed and integrated SQL-driven reports for adoptions, expenses, and volunteers, with drill-down views, data validation, and user-friendly UI filtering.

AI-Based (Machine Learning) Trading System | *Python, PyCharm, Matplotlib, Numpy, Pandas* Jan. 2025 – Apr. 2025
- Built a simplified algorithmic trading system in Python using technical indicators (RSI, BBP, CCI) to implement both rule-based and AI-driven strategies.
- Developed a Q-Learner and Bagging ensemble models with Random Decision Trees as base learners, outperforming manual strategies and benchmarks in Sharpe ratio and cumulative return.
- Applied NumPy, Pandas, Matplotlib, and PyCharm to engineer features, visualize trading behavior, and conduct historical backtesting.

Publications

1. Liu T, Momin M, **Zhou H**, et al. *Exome-Wide Association Study Identifies East Asian-Specific Missense Variant MTHFR C136T Influencing Homocysteine Levels in Chinese Populations.* Front Genet. 2021.
2. **Zhou H**, Zhao H, Zheng J, et al. *CRISPRs Provide Broad and Robust Protection to Oral Microbial Flora of Gingival Health Against Bacteriophage Challenge.* Protein Cell. 2015.
3. Zhang X, **Zhou H**, Zang X, et al. *MIPS: A Calmodulin-Binding Protein of Gracilaria Lemaneiformis Under Heat Shock.* Mar Biotechnol. 2014.

Adwards

Outstanding Student Award, Outstanding Student Leader University of Chinese Academy of Sciences
Academic Scholarship, Sports Scholarship Ocean University of China
Qingdao City Science and Technology Paper Competition First Prize
National College Students Challenge Cup Second Prize