Zhanqing (Mason) Ma

805-722-6800 | zhanqingma2025@u.northwestern.edu | linkedin.com/in/mason-ma-2353a8314

EDUCATION

Northwestern University   Evanston, IL
Master of Science in Machine Learning and Data Science   **Expected Dec 2025**

University of California, Santa Barbara   Santa Barbara, CA
Bachelor of Science in Computer Science; Double Major in Statistics and Data Science   **Aug 2020 – Dec 2023**

Cumulative GPA: **3.9 / 4.0** | Dean's Honors from Fall 2020 to Fall 2023

TECHNICAL SKILLS

Programming: C++, Python, RStudio, Java, SQL, C#, SAS
Frameworks and Libraries: Pandas, Matplotlib, Scikit-Learn, PyTorch, Tensorflow, Spring Framework, MongoDB, Node.js
General: Data Mining, Algorithms and Data Structures, Statistical Modeling, Data Analysis, Machine Learning Techniques, NLP

WORK EXPERIENCE

Amazon, Software Development Engineer Intern | Remote   **Jun 2023 – Sep 2023**
- Implemented Whole-body 2D Pose Estimation for real-time camera feeds. leveraged a novel neural network architecture tailored for soccer player re-identification by Lightweight-Openpose and MoveNet, improving detection speed by 20%
- Mastered WebRTC protocols, building a LAN-based video chat supporting 100+ concurrent users; facilitated 30% faster local-to-cloud video stream conversions through SRS integration
- Engineered a Python solution to retrieve video streams from SRS at 60 fps; processed and repackaged frames with a selected algorithm, resulting in 15% better compression and transmission rates

SF Express Corporation, Data Scientist Intern | Tianjin, China   **May 2022 – Sep 2022**
- Employed Excel and RStudio to gather and analyze over 1 million data points to identify market trends and opportunities, resulting in a comprehensive database that bolstered decision-making and boosted efficiency by 10%
- Worked closely with over 4 departmental teams, harnessing analytical insights to systematically refine operational processes and provide direction for overarching business strategies
- Recognized and awarded the title of "Employee of the Season" amidst a pool of 200+ employees due to consistent outstanding performance, demonstration of leadership, and making pivotal contributions

China Computer Federation, Software Engineer Intern | Beijing, China   **Jun 2021 – Sep 2021**
- Streamlined and refined product algorithms by effectively balancing various technical trade-offs, which directly led to an 6% reduction in overall production costs
- Achieved a notable 10% boost in both accuracy and reliability, ensuring dependable outputs and enhancing user trust in the system's results

PROJECT EXPERIENCE

NLP Project, Research Assistant | Remote   **Sep 2023 – Dec 2023**
- Leveraged the refined Skip-gram model on a 500,000-word corpus, ranking word IDs by frequency; adopted subsampling for a 50,000-word vocabulary; designed sliding window training data, improving context prediction accuracy by 15%
- Employed LSTM in PyTorch for IMDB analysis; conducted regression on STSB; enhanced CoLA grammaticality judgments with RNN and LSTM; developed an English-Japanese translation model using transformer and MSLT corpus

Course Search Web Application, Author & Researcher | Santa Barbara, CA   **Sep 2023 – Dec 2023**
- Collaborated with cross-functional teams to integrate over 5 UI features in React and backend functionalities in Node.js; managed development iterations using Git, ensuring systematic version control and streamlined progression
- Utilized Node.js for server-side testing, fixing 10+ bugs; continuously refactored the React frontend to boost stability; diligently documented milestones and code changes, syncing via Git pull requests and merges for unified team development

Interactive Solar System, Author & Leader | Santa Barbara, CA   **Jan 2023 – Mar 2023**
- Developed an interactive 3D solar system model in Unity Hub using C# and JavaScript; enhanced interactivity by allowing clickable planets, pop-up info windows, and detailed zoom exploration
- Prioritized real-world accuracy using high-quality textures and accurate orbital paths; utilized WebGL for web browser rendering and managed version control through VS Code and GitHub

Heart Failure Prediction Project, Author & Researcher | Santa Barbara, CA   **Sep 2022 – Dec 2022**
- Used R in RStudio to analyze a dataset of over 1 million observations, pinpointing key relationships and refining predictors for machine learning; fine-tuned Random Forest and Boosted Tree algorithms, surpassing 90% test dataset accuracy
- Provided in-depth recommendations for further optimization, underscoring the benefits of incorporating larger datasets; emphasized the potential to significantly boost model precision and address the distinct challenges in the existing data