# **ZHIZHENG WANG**

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# **EDUCATION**

#### University of Michigan - Ann Arbor, MI

August 2025 - July 2027 (Expected)

• Master's in Data Science (GPA: 4.00/4.00)

#### University of Georgia - Athens, GA

August 2021 - May 2025

• Bachelor's in Data Science and Cognitive Science (GPA: 3.85/4.00), Computer Science (minor)

#### **Relevant Courses:**

#### Data Science

CSCI 1301 Intro to Computing & Programming (A-), CSCI 1302 Software Development (A), CSCI 2610 Discrete Mathematics for CS (A-), CSCI 2725 Data Structures for Data Science (A), CSCI 3360 Data Science I (A), CSCI 4260 Data Security & Privacy (B+), CSCI 4360 Data Science II (A), CSCI 4370 Database Management (A), CSCI 4380 Data Mining (A), CSCI 4550 Artificial Intelligence (IP), CSCI 4990 Data Science Capstone (IP)

# Statistics / Mathematics

STAT 2010 Statistical Methods for Data Scientists (A), STAT 4220 Applied Experimental Designs (A), STAT 4230 Applied Regression Analysis (A-), STAT 4280 Applied Time Series Analysis (A), STAT 4365 Modern Statistical Programming (A), STAT 4510 Mathematical Statistics I (A), STAT 4530 Statistical Inference for Data Scientists (A), STAT 4620 Categorical Data Analysis (A), STAT 4800 Tools for Statistical Theory (A), MATH 1113 Precalculus (A, transfer), MATH 2250 Calculus I for Science & Engineering (A), MATH 2260 Calculus II for Science & Engineering (B+), MATH 3300 Applied Linear Algebra (B)

# Cognitive Science / Philosophy / Psychology

ARTI 3550 Introduction to Cognitive Science (A-), LING 2100 Study of Language (A), PSYC 1101 Elementary Psychology (B), PSYC 4100 Cognitive Psychology (A), PHIL 2010 Introduction to Philosophy (A), PHIL 2500 Symbolic Logic (A), PHIL 3400 Philosophical Psychology (A-), PHIL 4510 Deductive Systems (A-)

#### SKILLS

# **Programming & Databases:**

Python (4 yrs), SQL (3 yrs), R (4 yrs), Java (4 yrs), Database Management

# **Data Science & Machine Learning:**

NLP, Deep Learning, Predictive Modeling, Data Visualization, Statistical Analysis, Regression & Time Series, Data Cleaning & Wrangling, Data Mining, Experimental Design, Bayesian Inference, Web Scraping, API Integration

#### **Tools & Collaboration:**

NumPy, Pandas, Scikit-learn, TensorFlow, PyTorch, Jupyter, Google Colab, Excel, Power BI, Git/GitHub, Linux, LaTeX

#### WORK EXPERIENCE

Intelligent Thought and Action Lab (THINC) http://thinc.cs.uga.edu

February 2024 - September 2024

Undergraduate Researcher

Athens, GA

- Curated and annotated a dataset of over 6000 images, ensuring quality data for AI model training.
- Developed 5 Python scripts to automate camera settings, data extraction, and workflows.
- Collaborated with a Ph.D. student to fine-tune the YOLO model for object detection with 99% accuracy.
- Integrated YOLOv8 into PrecisionSort; ongoing updates for improved performance

#### **UGA Office for Student Success and Achievement**

**January 2024 - May 2025** 

Peer Tutor (Statistics/Computer Science/Mathematics)

Athens, GA

- Provided constructive feedback and guided problem-solving in one-on-one and group Study Pod sessions.
- Mentored over 50 students in academic strategies, enhancing critical thinking and analytical skills.

#### **Data Science & Artificial Intelligence**

**July 2025** 

Student Assistant

Athens, GA

- Guided middle and high school students through AI and coding exercises, troubleshooting issues, and answering questions.
- Assisted instructors in preparing lesson materials and managing classroom activities.
- Mentored campers to foster interest in AI, programming, and problem-solving skills.
- Maintained a safe and collaborative learning environment, ensuring smooth daily operations

US Kids Golf
June 2019 - July 2025

Volunteer

Little Rock, AR

- Streamlined tournament operations for 80+ players by managing registration and tracking scores.
- Administered award distribution for all participants, ensuring result accuracy.
- Coordinated daily logistics to support staff and enhance the experience for attendees.

#### **PROJECTS**

# Addressing Data Imbalance: Upsampling vs. Downsampling on Sport Images (Python)

- Applied Wavelet Resampling techniques to enhance datasets, preserving critical features like edges.
- Evaluated CNNs like ResNet50, VGG, and GoogLeNet, achieving up to 87.91% accuracy.
- Used wavelet coefficients to retain image details and optimize datasets, reducing resolution to 128 x 128.

#### F-1 Racing (MySQL, HTML, CSS, JavaScript)

- Crafted analytical queries to uncover insights on driver performance, race dynamics, and team strategies.
- Built a website for running SQL queries and displaying data, with pre-made analytical queries for insights.
- Organized data into tables with primary keys to avoid redundancy, ensured all attributes depended only on the primary key, removed indirect dependencies, and further split tables if needed.

#### **Urban Heat Island (UHI) Prediction Project (Python)**

- Developed a machine learning model to predict Urban Heat Island effects using Python.
- Collected, cleaned, and analyzed environmental and geospatial data to identify patterns.
- Applied regression and classification techniques to forecast temperature anomalies.
- Visualized results to communicate insights effectively and support data-driven decisions.

### **Stock Market Time Series Forecasting – GARCH Model** (R)

- Forecasted stock market returns using **GARCH** and **Random Walk** models to identify the best long-term investment opportunities.
- Analyzed historical stock data across 10, 20, 30, and 40-year intervals to assess potential ROI.
- Implemented time series models in Python and evaluated predictive accuracy against actual market trends.
- Studied and applied fundamental principles of GARCH modeling to support data-driven investment decisions.

# **Image Gallery App – Software Development Project** (Java)

- Developed a **GUI application** that displays books, albums, or other works by entering an artist's name.
- Implemented functionality to retrieve and display media dynamically in an organized gallery format.
- Built with a focus on user-friendly interaction and clean interface design for easy browsing.
- Gained experience in GUI programming, data handling, and software deployment.

# **INVOLVEMENTS & INTERESTS**

**Involvements:** UGA Stat Club, Asian American Student Association, Billiard Club of UGA, Atlanta Go Club **Interests:** Weightlifting, Historical Fiction Books, Photography, Go