Zaiqian "Ting" Chen

✉ ting.chen@richmond.edu
🖥 tingtang2.github.io
🐙 tingtang2

Education

2017–2021	**BS, Computer Science, Mathematical Economics, Summa Cum Laude**, *University of Richmond*, Richmond, VA, GPA: *3.94/4.00*.
	Double Major: Computer Science (Concentration: Data Science and Statistics) (*Honors*) and Mathematical Economics
	Course Highlights: Artificial Intelligence, Real Analysis, Software Systems Development, Mathematical Statistics, The Mathematics of Simulation, Programming Languages, Advanced Econometrics
Fall 2019	**Visiting Student**, *University of Edinburgh*, Edinburgh, Scotland, GPA: *4.0/4.0*.
	Course Highlights: Machine Learning and Pattern Recognition, Accelerated Natural Language Processing, Fundamentals of Operational Research

Publications

DSAA 2021	Z. Chen and J. Park, *Analyzing Cultural Assimilation through the Lens of Yelp Restaurant Reviews* at the 8th IEEE International Conference on Data Science and Advanced Analytics (DSAA 2021)

Research Experience

2020–2021 — Honors Thesis, *Department of Computer Science: Dr. Joonsuk Park*, University of Richmond.
- Developed methods for non-tree argument mining using BERT-based transfer learning and dependency parsing methods
- Implemented methods in PyTorch and Huggingface's `transformers` library

Spring, Summer 2020 — Research Assistant, *Department of Computer Science: Dr. Joonsuk Park*, University of Richmond.
- Developed probabilistic graphical models to perform topic modeling on online review data
- Implemented graphical models with collapsed Gibbs Sampling in Python and Cython
- Project culminating into DSAA 2021 publication

Summer 2019 — Summer Research Fellowship, *Department of Computer Science: Dr. Prateek Bhakta*, University of Richmond.
- Developed algorithms towards fair and robust liver donation allocation strategies, focusing on maximum-flow algorithms and their properties
- Programmed simulations in Python and C++ to test developed algorithms
- Scrapped and cleaned medical and geographical data from publicly available sources for use in simulations

2018–2019 — Research Assistant, *Department of Psychology: Dr. Cindy Bukach's Lab*, University of Richmond.
- Programmed experiments using Neurobehavioral Systems Presentation, Codex Superlab, and Python with the PsychoPy package which investigated the Other Race Effect (ORE) and the Angry Black Bias
- Performed data cleaning and analysis using Python and R
- Created interactive web simulations using HYPE

Work Experience

Summer 2021-Present — Machine Learning Software Engineer, *CarMax*.
- Working on the Data Science and Machine Learning Team towards upgrading and maintaining the vehicle recommendations API
- Deploying and monitoring the vehicle recommendations API using Microsoft Azure, Cosmos DB, and Azure DevOps
- Maintaining and tuning the recommendation algorithm using Apache Spark, Databricks, and Python

Spring 2019, Spring 2021 — Grading Assistant, *Department of Computer Science*, University of Richmond.
Graded weekly homeworks and programming assignments for two sections of CMSC 221: Data Structures, taught by Dr. Jory Denny, as well as one section of CMSC 301: Computer Organization, taught by Dr. Prateek Bhakta

Spring 2019 — Grading Assistant, *Department of Mathematics*, University of Richmond.
Graded weekly homeworks for two sections of MATH 240: Linear Algebra, taught by Dr. William Ross

Summer 2017 — Information Technology Support Staff, *Arlington Central School District*.
Assembled, repaired, reimaged, and pushed software updates through computer systems throughout the school district

Projects

Spring 2020 — Adversarial Search in Chess: Formulated chess as an adversarial search problem and implemented the H-Minimax with Alpha-Beta pruning algorithm to determine the best move to take (CMSC 395, Artificial Intelligence, University of Richmond)

Fall 2019 — Predicting relative locations of CT slices on axial axis: Compared performance of predicting relative locations of CT scan slices from UCI Machine Learning Repository using simple neural networks, logistic regression, linear regression, and Principal Component Analysis (INFR11130, Machine Learning and Pattern Recognition, University of Edinburgh)

Fall 2019	**Exploring distributional similarity in Twitter:** Reduced the dimensionality of Twitter data to see if adequate similarities between words were maintained (INFR11125, Accelerated Natural Language Processing, University of Edinburgh)
Spring 2019	**CPU pipelining:** Simulated pipelining of MIPS assembly instructions in the CPU with optimizations in C++. (CMSC 301, Computer Organization, University of Richmond)
Spring 2019	**Distance Viewing Toolkit (dvt):** Tested toolkit of large scale computer vision algorithms for cultural analysis (CMSC 340, Independent Study, University of Richmond)

Honors

2017–2021	**University of Richmond Science Scholar Award:** full tuition merit scholarship for 4 years
2017–2021	**National Merit Scholarship**
2017	**National AP Scholar**
2016	**Most Interesting Hack** at Vassar College Hackathon