# Yueqiao Chen

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## EDUCATION

**GEORGIA INSTITUTE OF TECHNOLOGY, College of Computing** **Atlanta, GA**

***Bachelor of Science in Computer Science, Cumulative GPA: 4.0/4.0*** ***May 2023***

Honors: Faculty Honors Spring 2022, Faculty Honors Fall 2021, Faculty Honors Fall 2020, President Award 2019
Organization: IEEE- Eta Kappa Nu (HKN) (GT Honor Society), Society of Women Engineers (GT)

## RESEARCH

**VERTICALLY INTEGRATED PROJECTS, Intelligent Tutoring System Team** **Atlanta, GA**

***(Undergraduate research Supervised by Dr. James H. McClellan and Mr. Gregorg A Krudysz)*** ***Jan. 2022 – Present***

*Stage 1: Question and Answering System*

- Joined Tutor-Bot team that was building an intelligent chatbot to help GT teaching assistants handle high volumes of questions from the ECE Digital Signal Processing (DSP) course.
- Implemented different models related to Natural Language Processing and finetuned the models in python with over 10000 training examples to predict answers to students' questions.
- Created a live Q&A system that achieved over 70% at answer rate to student questions.

*Stage 2: Question Recommender*

- Developed an algorithm to reduce the number of questions that TAs need to response to intelligently predicting students' questions' and directing them to the pre-made answers.
- Algorithm is trained on a 1000 question dataset from DSP textbooks and Piazza.com and uses question frequency, and recency to auto-complete questions as students are typing them.

*Stage 3: Textbook Summarization and Mind Maps (still in progress)*

- Extracted summary for each sub-chapters and construct a tree structure of keywords for building mind map.

## WORK EXPERIENCE

**Xinzhongguan Intelligence Technology Co., Ltd. (a leading B2B online shopping platform)** **Fuzhou, China**

***Software Engineer Intern*** ***Summer 2022***

- Worked within a team of 8 engineers to debug potentially critical security flaws in HTTP requests and prevent potentially losses.
- Used tools such as Postman to create test cases and explore parameters and settings that could lead to compromised security.

## PROJECTS

**Machine Learning Project – Supervised Learning** **Sep. – Dec. 2022**

- Used a cleaned data set contains data on 100,000 used cars in the UK from Kaggle to predict car prices.
- Selected features according to heatmap using PCA and created model using linear regression and decision tree.
- Evaluated the quality of our predictive models using R square score and achieved 94.5% accuracy.

**Intelligent Pacman AI** **Jan. - May 2022**

- Trained AI to play Pacman across a variety of settings, with the goal of optimizing the pathing to gather the most the rewards and achieve the highest score in the shortest amount of time
- Implemented Reinforcement/Q-learning using 2000 training games in Python
- Achieved a 90% wining rate across 100 test games

**A Tower Defense Game** **Sep. – Dec. 2021**

- Collaborated with a team of 5 to develop a Tower Defense game with three levels of difficulties using JavaFX
- Applied software engineering principles, such as SOLID, GRASP, Design Patterns, TDD to create a working game and text with other classmates

## ADDITIONAL INFORMATION

- Programming languages: Java, JavaFX, Python, C, LaTeX, Assembly Language
- Experience in: UML, Data Structures and Algorithms, Object-oriented Programming Principles, Event-Driven Programming Principles, JavaFX (GUI), Recursion, Big O, Object-oriented Design, Markov Decision Processes, Reinforcement Learning, Bayesian Networks, Neural Network, Random Variables, Divide and Conquer Algorithms, Dynamic Programming Algorithms, and LC-3
- Languages: Native proficiency in Mandarin Chinese
- Interests: Swimming, drawing, singing, playing the piano, cooking