

# Fortythree Shiahongtu

## EDUCATION

University of Texas at Dallas  
M.S. in Computer Science  
University of Texas at Dallas  
B.S. in Computer Science

## CONTACT INFO

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## SKILLS

### Programming Languages

Python • Node.js • Java • C#  
JavaScript • HTML •  $\text{\LaTeX}$

### Databases

SQL • Oracle • SQLite  
MongoDB • AzureCosmosDB

### Languages

English, *Fluent*  
Mandarin Chinese, *Fluent*

## COURSEWORK

Machine Learning  
Probabilistic Graphical Models  
Network Security  
Database Design  
Data Structures & Algorithms  
Operating Systems Concepts  
Convolutional Neural Networks

## EXPERIENCE

**FILE & SERVE EXPRESS, Junior Software Developer**  
*Irving, Texas*

*June 2019 — March 2020*

- Exposed **REST APIs** on a legacy system and utilized its functionality on a GUI using **C#**. This improved efficiency and performance in manipulating data by the AppOps team
- Developed web-based **C# .NET Core** applications using Visual Studio
- Created unit tests for all code submitted and extend test coverage for existing legacy code
- Collaborated with the QA analyst team to understand application functionality and automate test cases
- Maintenance and support of electronic filing service provide products, including front-end UI improvements/updated with back-end integration and performance upgrades
- Mentored and assisted others in the team who are less familiar with the code base to establish knowledge on the product, which increased development speed and maximized sprint cycle efficiency

**KOBE STEAKS, Server**  
*Addison, Texas*

*May 2017 — May 2019*

- Customer-service focused, ensuring that guests have a high quality dining experience
- Worked collaboratively with other employees in a team-driven environment

**ENRICHMENT CHESS, Teacher's Assistant**  
*Dallas, Texas*

*September 2017 — December 2017*

- Taught chess classes upwards of 20+ students, incorporating a variety of chess strategies
- Kept detailed progress notes on each student and worked closely with them to improve their skills

## PROJECTS

**DEEP LEARNING ON MINESWEEPER**

May 2020 — Present

- Implemented game logic and machine learning models using **python** and front end UI using **Flask**
- Agents learned completely through self-play, with no past human experiences
- Utilized the **Keras** and **Tensorflow** library
- Models created using **convolutional neural network** by applying different techniques such as **batch normalization**, **dropout**, **padding**, and **residual connections**
- Created multiple reinforcement learning agents using **policy gradient**, **actor-critic** and **q-learning** method

**INTELLIGENT TUTORING SYSTEM**

January 2019 — May 2019

- Web application that captures student's attentiveness and emotion during lectures
- Back-end machine learning model implemented using **python**, **mongoDB** as database and **node.js** for front-end UI
- Worked in a team of 5 people including an advisor where tasks were split among the team in weekly meetings