

# Shen-En Chen (Andrew Chen)

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## EDUCATION

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### Georgia Institute of Technology | Atlanta, GA

- Bachelor of Science in Computer Science (Intelligence & Info Internetworking), GPA 3.95 August 2018 – May 2021

## SKILLS

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- Programming/Markup Languages:** Java, Python, C++, C, HTML, CSS, JavaScript, Assembly
- Library & Frameworks:** Numpy, Scipy, Pandas, scikit-learn, Tensorflow/Keras, OpenCV, JavaFX, Spacy, NLTK, React.js
- Relevant Courses:** Object-Oriented Design, Data Structures, Applied Combinatorics, Probability & Statistics, Algorithms, Database Systems, Computer Networking I, Computer Vision, Natural Language Processing

## EXPERIENCE

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### Medical Informatic Research and Genetic Elucidation Lab, National Taiwan University | Taiwan May 2019 – August 2019

#### Machine Learning Intern

- Built a facial recognition program using OpenCV and convolutional neural networks (CNNs).
- Designed a machine learning classification model for 5 common lung tumor types using ensemble one-vs-one support vector machine (SVM) classifier.
- Applied 3D residual convolutional neural networks, using Keras and scikit-learn, on augmented Lung Image Database Consortium image collection (LIDC-IDRI) to classify benign and malignant lung tumors and achieved an accuracy, sensitivity, and specificity of 97.23%, 95.54%, and 98.12%, respectively.

## PROJECTS

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### ITS-Chatbot v2 (Generative Model) | Atlanta, GA

August 2020 – December 2020

*Continuation of the ITS-Chatbot project using a transformer-based model.*

- Implemented a test script that evaluates the model on Piazza questions using Exact Match and F1 as metrics.
- Improved generated-answer selection with softmax confidence score calculation and thresholding.
- Incorporated and tested a BERT QA model on existing chatbot architecture using the ktrain Python library.
- Overhauled the model in a more object-oriented fashion that eased the subsequent implementation of the transformer-based document retriever.

### ITS-Chatbot | Atlanta, GA

January 2020 – May 2020

*A chatbot add-on that aims to support digital dialogs between students and all resources available for a course.*

- Build a data preprocessing pipeline for Piazza posts and comments using Spacy, NLTK and other Python libraries.
- Integrate the data preprocessing pipeline with the document embedding script and chatbot interface.

### Space Explorer | Atlanta, GA

September 2019 – December 2019

*A Java-based strategy game featuring space travel and exploration.*

- Developed a Java Swing game interface and maps based on use case diagrams and domain models.
- Applied GRASP principles, SOLID principles, and design patterns such as singleton to achieve object-oriented design.
- Structured the program based on model-view-controller (MVC) pattern to reduce the coupling amongst classes.

## LEADERSHIP

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### Data Science at Georgia Tech (DSGT, or Data Science at GT) | Atlanta, GA

October 2018 – April 2020

#### Marketing Director (May 2019 – April 2020)

- Redesigned DSGT and Hacklytics 2020 datathon logo, website, and merchandise and successfully attracted record-high 230 club members.
- Attracted 175 attendees for DSGT Fall 2019 Kickoff and over 500 sign-ups for Hacklytics 2020 datathon through Mailchimp campaigns, social media promotion, and on-campus marketing within 3 weeks.

#### Content Creator (January 2019 – April 2020)

- Incorporated Jupyter Notebook with presentation to build interactive data science workshops for more than 80 DSGT members on topics such as Support Vector Machine, Ensemble Methods, and Intro to Deep Learning.
- Created and presented “Make Use of Data” workshop to over 50 student participants at Hacklytics 2020 datathon.