# Juo-Yang Chen

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## Education

**Georgia Institute of Technology** **August 2018 - May 2022**
*Bachelor of Science in Computer Science* *GPA: 3.85/4.0*

*Master of Science in Computer Science* ***Expected Graduation: Dec. 2023***

**Relevant Coursework**: Data Structures, Graduate Algorithms, Artificial Intelligence, Machine Learning, Advanced Databases, Advanced Networks, OOP, Computer Animation

## Experience

**Viasat Inc.** **May 2021 – Aug. 2021**
*Software and Data Engineer Intern* *Carlsbad, California*

- Implemented a JupyterLab Extension with **React** and **Typescript** that aggregates company datasets, models, and features, makes the data filterable based on a multitude of metrics, and integrates into the Machine Learning workflow.
- Completed backend integration with **RESTful APIs** and **PostgreSQL** in the model-view-adapter pattern by creating loosely coupled components capable of accommodating other forms of backend.
- Benchedmarked the **Elyra** ML pipeline-interface by leveraging **docker containers**, setting up **Kubernetes clusters**, and presenting the pros and cons to potential users within the company (data scientists).

**WeGrains Co.** **May 2020 – Aug. 2020**
*Full Stack Software Engineer Intern* *Taipei, Taiwan*

- Developed a progressive web app for car parking systems that allows users to operate gates via their mobile device, saving approximately two hours a week in commuting time.
- Created front-end with **React** by utilizing **Redux**, the **Google Maps API**, and **Axios** to allow users to navigate easily by searching with an address or adding filters to show the desired information.
- Implemented back-end with **Node.js** to process user, parking lot, and manager data with processes such as authentication, filtering, and checking for validity of actions.
- Designed and set up a **MySQL** database to store user and parking lot data by structuring through an extensive **ER diagram** and deployed on **Heroku ClearDB**.

## Projects

**Historical Stock Tweet Sentiment Analysis** | *Node.js, React, MongoDB, Netlify*

- Created a scalable system that allows users to easily track the overall historic sentiment of various companies on Twitter via both a RESTful API and an interactive web app.
- Utilized **Apache Spark** to process tweets (from the Twitter API) then stores stock sentiment and prices as a filterable unified time-series in **TimeScaleDB** after a Python chron job runs, which retrieves data for each ticker daily.
- Implemented comprehensive serverless functions with **Netlify** to quickly query different parameters.

**Geoguesser Machine Learning Model** | *Python, Keras, Scikit-learn*

- Constructed a machine learning model that uses **convolutional neural networks (CNN)** to pinpoint the precise latitude and longitude given any Pittsburgh street image.
- Pre-processed the image dataset with **numpy** and **sklearn** by eliminating noisy input images from the dataset and normalizing the data for easier analysis.

**HackGT Computer Vision Instrument** | *JavaScript, HTML, CSS, OpenCV, Node.js*

- Made a Guitar Hero style game that uses **OpenCV** to detect the position of one's mouth and fist, which determines volume and pitch, and scores the player based on accuracy, timing, and musicality.
- Laid out the game environment based on an additional program that separates the main vocal track from midi files.

## Technical Skills

**Languages**: Python, JavaScript, Java, SQL, C++, HTML, CSS, Assembly
**Developer Tools/Frameworks**: React, Redux, Node.js, Scikit-learn, Numpy, Docker, Unity, Angular, Kubernetes, Git

## Leadership / Extracurricular

**Seoulstice Dance Team** **Summer 2021 – Present**
*President* *Georgia Institute of Technology*

- Lead an elite college dance group by teaching choreography and dance fundamentals as well as organizing logistics.
- Awarded **first place** in the Atlanta k-pop dance competition.