Linlin Zhang

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EDUCATION

Columbia University New York, USA 2024.9 – 2025.12
MS in Computer Science (VGIR Track) *GPA: NA/4.0*
University of Wisconsin Madison Madison, USA 2021.9 - 2024.5
BS in Computer Science & Data Science *GPA: 3.9/4.0*
Honor: Dean's List (2021-Now)
College of Letters and Science Honors Program student

INTERN EXPERIENCES

Alphabet Inc. | YTM MLMS and Software Development Intern Mountain View, California *2023.6 - 2023.9*

- Developed a YTM Music Library Management System leveraging the Koa framework, axios, koa-jwt, music-metadata, jpeg-js, and MongoDB to provide a stable and user-friendly platform
- Implemented functionality for importing and editing music libraries from both local file systems and online sources, facilitating easy management and access for users
- Crafted label editing and management for the music library to facilitate user-friendly music categorization and search and provided playlist functionality for users to add and manage music for playback
- Parsed and extracted metadata from music files, ensuring detailed information like song names and album covers were accessible
- Developed API interfaces for seamless integration with third-party applications, enhancing the music playback and management capabilities
- Conduct research on open-source projects, various specialized technologies; introduce forward-looking projects for designing new technologies; Apply deep learning models and algorithmic techniques to analyze, model, and continuously tune text, image, video, and other data; Assist the team to overcome various technical difficulties in high concurrency, data isolation, system decoupling

CTI ONE CORPORATION | CV and Software Engineer Intern Santa Clara *2023.9 - 2024.3*

- Participated in software development process, designing and testing of CTI One's AI-enable product development in the W100 project for robotics healthcare applications
- Created and maintained a Github repository for the project's software under supervision, ensuring version control and efficient collaboration, and adopting a rigorous style of writing for README files to ensure clear and effective documentation
- Engaged in leadership circle management training, undertaking tasks as a trainee with the aim of becoming a leadership circle member, enhancing leadership and management skills

ACADEMIC EXPERIENCES

Modern Data Visualization of Big Data | Team Leader Madison *2023.3 - 2023.5*

- Conducted data retrieval, data exploration, and data visualization analysis on 6,468 pieces of data of air pollution deaths in each country from 1990 to 2017 from the Kaggle dataset
- Compared the results of Linear Regression, KNN, SVM, and Polynomial Regression, performing an analysis of their strengths and weaknesses
- Identified the most accurate machine learning algorithms to determine whether a country is experiencing a large number of deaths caused by pollution, and utilized regression prediction algorithms to estimate the number of deaths that could be caused by air pollution in the future

Wisconsin Autonomous Team | Team Leader Madison *2022.9 - 2022.12*

- Developed 2D object detection using Python, C++, and Yolov5; enhanced perception capabilities using Point Cloud Library (PCL)
- Conducted research on lidar detection and trained data using Yolov7 for improved object recognition

Applied Computer Vision (PBL Program) | Research Leader Madison *2021.12 - 2022.2*

- Preprocessed a large dataset for training by cleaning data to handle data inconstancy, data transformation to convert data into suitable formats, and data splitting to create balanced training and testing sets
- Applied Computer Vision to a business problem with Colab Notebook and TensorFlow, building computer vision models from scratch, creating application, and deploying it to the edge-based inference
- Utilized different fine-tuning techniques such as change of optimization algorithm and adjustment of learning rate to avoid overfitting and increase accuracy of classification

EXTRACURRICULAR ACTIVITIES

Chinese Undergraduate Student Association | Publicity Team Leader Madison *2019.11 - Present*

- Designed event posters, conducted video screen shooting, and post-production tasks
- Contributed to the production of Chinese versions of 'Rate My Professor', 'New Student Guide MadFresh', and 'Madman Street' street interviews

Student Union & School Debate Club & Dance Club *2019.11 - 2021.9*

Head of Activities Department, Competition Department Nanjing, China

Leader of Publicity and Promotion Department & The Best Debater & Leader of Dance Club Nanjing, China

TECHNICAL SKILLS

Languages: Java, Javascript, Python, R, HTML/CSS, C, C++, SQL, Swift, Bash

Frameworks: Xcode, Android Studio, TensorFlow, Django

Tools: OpenCV, Git, IntelliJ IDEA, VS Code, Colab, MATLAB, AE, AI, PR, Rhino, PS, JIRA, Unity, Blender

PRIZES

National College Student Computer Design Competition - National Second Prize *2020.5*

National University Computer Competition - Network Technology Challenge - Second Prize *2020.10*

Provincial Autonomous Competition - First Prize *2021.8*

National Higher Education Institutions Financial Mathematical Competition – Provincial First Prize *2020.9*

National Scholarship at Southeast University 2020.9

College computer programming competition - First prize, Best Designer *2019.9*

PATENTS & PUBLICATIONS

Image Style Transfer Using SqueezeNet and VAE: A Comparative Analysis | Publication Accepted 2023.5 - 2023.6

CONF-CDS 2023 – Journal of Physics: Conference Series (Print ISSN: 1742-6588) / Applied and Computational Engineering (Print ISSN: 2755- 2721)

- Explores SqueezeNet and Variational Autoencoder (VAE) models for Image Style Transfer (produce style-transferred images)

SuikeJi App - OpenCV, Android Studio | Patent 2019.9 - 2021.1

- A software based on OpenCV, Android Studio, Image recognition Algorithms which could catch and record course ppt, translate audio to text, keyword search, sharing notes in the course library module etc. (Oral Presentations & Obtain a software publication)

Design and Implementation of Note-Taking APP Based on SSD_Mobilenet & OpenCV | Publication 2021.9

DOI: 10.3969/j.issn.1001-2362.2021.05.010

- (China CIO) Information System Engineering' 21 | Science and technology monthly

PROJECTS

Enhanced AI Application | 2023.8 - 2023.9

- Enhance AI applications using Python & Google's Pegasus for advanced text summarization
- Using YouTube captioning API, making the automatic generation of concise and informative text summaries from video tutorials
- Using traditional abstract algorithms & Pegasus algorithms; Apply the full NLP industrial workflow including tokenization, encoding, model training, and deployment

LuckyGallery – Unity & Blender | LuckyGallery Zip File 2023.6 - 2023.8

- A Unity project includes roaming and interaction function; WASD controls; Right click Mouse to drag; Integrative pictures and models

To-Do List Web App | 2023.5 - 2023.8

- A To-Do List App developed in Python & Django; Store data in a database, easy to update changes and cross out/delete from the to-do list
- Landscaping of web pages using Bootstrap CSS front-end framework and Sublime Text

Restaurant Reservation System | 2023.2 - 2023.5

- A web app using swagger designed a RESTful API which supports the basic functionality of the restaurant reservation system
- Writing RESTful API using express.js; Writing front-end code for a reservation system using react, typescript
- Connect APP with database and deployed to the cloud

Image Classification App | *https://github.com/Linlin-Zhang-Linda/ImageClassification* 2019.9 - 2021.12

- An image classifier for TensorFlow Lite on iOS, which uses Image classification to classify what it sees from the device's back camera, using a pre-trained model and swift in Xcode