LUNA HUAYUE LU

Graduate Student in Computer Science and Engineering
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SUMMARY

Computer Science Graduate with expertise in full-stack development, machine learning, data analysis and DevOps practices. Specialized in MERN Stack (MongoDB, Express.js, React and Node.js), Ruby on Rails and RESTful API development. Proven ability in building user-centric interfaces and robust backend systemsAdditionally, possesses a solid foundation in Machine Learning, and optimizing workflows with CI/CD practices, Jenkins, and Docker. Experienced in developing dynamic web applications and applying machine learning to solve real-world problems.

SKILLS

- **Programming Languages:** Python (Proficient), Ruby, Java, JavaScript, C, lisp, Matlab
- **Web Development:** HTML, CSS, Ruby on Rails, MERN Stack (MongoDB, Express.js, React, Node.js) Full Stack Development, REST API Development, MySQL, NoSQL
- **Development & Cloud Tools:** Git, AWS, Linux, Windows, MacOS, Jenkins, Docker, CI/CD, DevOps, Rails Console
- **Expertise:** Web Development, Machine Learning(TensorFlow, Keras, PyTorch), Data Analysis,Networked Embedded Systems

EDUCATION

Graduate Student in Computer Science and Engineering University of Connecticut (UCONN) | Storrs, CT, USA
Expected Graduation: **Dec 2024**
GPA: **3.67/4.0**
Relevant Courses: Machine Learning, Advanced Algorithms, Data Analysis, Big Data Analytics, Networked Embedded Systems

Non-Degree Student in Computer Science and Engineering University of Connecticut (UCONN) | Storrs, CT, USA
Sep. 2021 - May. 2022
GPA: **3.60/4.0**
Relevant Courses: Algorithms, Data Structure, Programming, Data Visualization

PROJECTS

Full Stack Book Store Application | ReactJS, NodeJS, Express, MongoDB, RESTful API, UI/UX
- Designed and developed a dynamic user interface using **ReactJS** with modern features.
- Built a robust backend API with **NodeJS** and **Express**, featuring **RESTful API** endpoints.
- Employed **MongoDB** for efficient data storage and retrieval.
- Implemented **user authentication** and authorization platform access.

Movie Discovery App using React JS | React JS, TMDB API, UI/UX
- Developed a user-friendly movie discovery app with **React JS**, integrating **TMDB API** for real-time movie searches and data presentation.
- Utilized **React hooks** for state management and functional components for dynamic rendering, enhancing the **UI/UX**.

Machine Learning Based Flower Image Recognition with Data Balancing | PyTorch, ResNet18, TTI
- Engineered an advanced image classification model utilizing **zero-shot text-to-image synthesis** to address data imbalance in the Flowers102 dataset.
- Implemented machine learning algorithms and **TTI model** integration to augment rare flower classes, significantly boosting data uniformity.
- Achieved a notable increase in **model accuracy from 62.25% to 67.25%** through the synthesized image augmentation approach.

PUBLICATIONS

- Xinran Zhou and **Huayue Lu.** "Improved On-Device Hyperdimensional-Computing-Based Image Segmentation." 2023 IEEE the 3rd International Conference on Intelligent Technology and Embedded Systems(ICITES).