

Yilin(Toby) Tao

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EDUCATION

Duke University

Master of Engineering in Electrical & Computer Engineering

Durham, NC

Aug 2022 – May 2024

University of Illinois Urbana-Champaign

Bachelor of Science in Information Science (Dean's List)

Champaign, IL

Jan 2021 – May 2022

EXPERIENCE

Software Engineering Intern

Volvo Car (Asia Pacific)

Apr 2023 – Aug 2023

Shanghai, China

- Performed the development of an automation application to enable users to switch between Power BI effortlessly reports, SharePoint, and more with a single click, resulting in enhanced interactivity through a status bar on the web interface
- Implemented an internal enterprise application with Tkinter, Selenium, Python, JavaScript, CSS, and HTML employed .bat file for asynchronous communication
- Responsible for writing core functionality code for Database Team, developed and maintained core system modules. Utilized tools like Azure and AWS for automated deployment, ensuring code reliability and security
- Deployed internal enterprise software to Azure cloud, serving over 30 departments across Volvo's Asia-Pacific region

Research Assistant

National Center for Supercomputing Applications (NCSA)

Jun 2021 – May 2022

Champaign, IL

- Aim to extract & index Astronomical Literature data from ADS (NASA Astrophysics Data System) based on combined text & image information using multi-modal deep learning models
- Fine-tuned BERT (NLP model) using TensorFlow, and 2D ResNet models using Keras for figure caption and image classification, outperforming the one-hot-code text model by 17% & VGGI6 model performance by 24% respectively
- Applied transferred learning to use MMBT by Hugging Face & achieved 92% classification accuracy

Data Visualization Intern

SAS Technologies

Apr 2021 – Aug 2021

Merced, CA

- Performed statistical analysis to understand key drivers of digital marketing metrics like acquisition, retention, ROI, engagement, and provided actionable recommendations for SEO, SEM, headline analysis, etc
- Managed full analytics process for digital products, including creating data capture frameworks, testing analytics
- Used Tableau to present findings in a comprehensive manner to a variety of internal & external stakeholders

PROJECTS

Full stack Discord Clone Web-App | Next.js 13, React, Socket, Prisma, Tailwind, MySQL

- Developed a full-stack comprehensive chat application that delivers a real-time chatting experience using Socket.io
- Utilized Tailwind and ShadcnUI to craft an aesthetically pleasing and responsive user interface
- Integrated Prisma as the ORM tool and utilized a MySQL database hosted on PlanetScale for efficient data storage
- Implemented one-on-one and group audio/video call features, integrating LiveKit for high-quality video communication
- Implemented a user authentication system using Clerk and seamlessly deployed the project on Railway

Full stack Mini-Amazon Web-App | Django, Python, Java, Google Protocol Buffer, PostgreSQL, JavaScript, Docker

- Developed a full-stack shopping web application, delivering a seamless online shopping experience comparable to Amazon
- Created a user-friendly front-end interface using Python, Bootstrap, HTML, CSS, and JavaScript
- Implemented a high efficiency communicating system between backend & frontend, backend & world-simulator, backend & UPS-simulator using TCP socket and Google Protocol Buffer
- Implemented a highly reliable multi-threaded backend server using Java which includes an Ack system that handles message loss and resending requests and realized interactions with database through JDBC and Mybatis framework

TECHNICAL SKILLS

Programming Languages: C/C++ 11, Python, Rust, Java, MySQL, TypeScript, HTML 5, CSS, JavaScript

Frameworks: Vue 3, Bootstrap, React, Node.js, Tailwind, Flask, Django, REST, FastAPI

Developer Tools: Git, MongoDB, AWS, Docker, Kubernetes, Jira, Tableau