Shizhan Liu

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Education

The Ohio State University, B.S. in Mathematics   Aug 2018 - Dec 2021

- Dean list for 6 semesters, *Magna Cum Laude*
- Relevant Courses: Introduction to programming in Java, Scientific Computing, Calculus I-III, Mathematical Statistics I-II, Differential Equation, Linear Algebra, Foundation of Higher Mathematics

Other Coursework

Excelsior College   Aug 2022 - Oct 2022

- Computer Organization and Operating Systems (IT 361)

UC San Diego Division of Extended Studies   Jun 2022 - Aug 2022

- Discrete Math: Problem solving for Engineering, Programming & Science (CSE-41243)
- Data Structures and Algorithms in Java (CSE-41321)

EdX NYUx   Sep 2022 - Nov 2022

- MicroBachelors Program in Introduction to Databases
- Expected to receive 3 academic hours from Thomas Edison State University after completion

EdX MITx   Jul 2021 - Aug 2021

- Introduction to Computational Thinking and Data Science (6.00.1x)

Technical Skills

Programming: Java, Python, Javascript, SQL, C, Assembly Language, Git, Shell
Backend: Servlet, Tomcat, JSP, JSTL, Spring, Spring MVC, MyBatis, JDBC, MySQL, Oracle, JavaMail, Shiro
Frontend: HTML, CSS, jQuery, React, Bootstrap, Layui, EChart. Element UI

Internships

Baidu, Zhengzhou, Henan, China, Software Engineer Intern   Jul 2022 - Oct 2022

- Developed an interactive web page using HTML, CSS, JavaScript, Element UI, and Layui for users to view image and to read information session of intangible cultural heritage
- Collaborated actively with members of client end, marketing, and accounting team to develop volunteer management system and donation module
- Implemented the WeChat Pay and Alipay into the donation module and receive over 100000 RMB donation
- Implemented the backend logic for CRUD operations for volunteer management system

Henan Dahe Network Digital Technology Co, Ltd
Zhengzhou, Henan, China, Software Engineer Intern (Backend)   Mar 2022 - Jul 2022

- Created database queries based on requirement, compiled SQL script, optimized the database system, successfully enhance the query efficiency by 20 percent
- Designed and implemented online registration login by using the .NET framework.
- Developed a daily updating model to record task statistics for frontend usage
- Analyzed 1000+ user feedback and cooperate with product manager to fix and maintain frontend web element to improve user satisfaction, achieved a 95%+ user satisfaction rate for 80+ consecutive days

Projects

Omnifood Website   Jul 2022 - Aug 2022
HTML, CSS, JavaScript

- Developed a real-world, eye-catching, responsive website with HTML, CSS Flexbox/Grid containing meals, terminals, pricings and Call-to-Action section
- Using Media queries and setting 5 breakpoints responding to small Laptops, landscape tablets, tablets, smaller tablets and phones

Strays Management Platform   Apr 2022 - Jun 2022
Spring MVC, Spring, MyBatis, HTML, CSS, JavaScript, MySQL, Tomcat, Druid, Maven, IntelliJ IDEA, Navicat

- Create a full-stack strays management platform where user can browse, login, comment, request adoption under different strays and admins can manage the admins, adopters and pets
- Developed frontend website using CSS, HTML, JSP, and Javascript, and utilize Ajax for web and server asynchronous transfer
- Achieved backend management system by three-tire architecture using Spring, SpringMVC and MySQL. Completed the CRUD for adopters, admins, and pets module respectively by MyBatis
- Utilized widely by Zhengzhou University student and successfully helped over 100 strays to find homes

Logistics Management System   Mar 2022 - Apr 2022
Shiro, JavaMail, Spring, Spring MVC, MyBatis Generator, MySQL, JSP, jQuery, CSS, Tomcat, Maven

- Developed a backend freight management system that include fright management module, statistical analysis module, basic information module, system management module
- Utilized RBAC module to manage user's permission and deployed Shiro framework to enhance system security
- Implemented MyBatis generator to achieve automatic code generation and Apache POI enabling massive data export
- Integrated JavaMail with Spring to achieve adding attachments in email delivery, and utilized Quartz package to send emails to company executive in a timely manner

Awards

Google Landmark Recognition, *Kaggle Competition (Silver Medal)*   Sep 2021 - Oct 2021

- Utilized metric learning method to classify over 81000 categories of landmarks
- Fine-tuned the large-scale image based on the pre-training weight of EfficientNet-B7 and EfficientNet-B6 ImageNet; hyperplane parameters of ArcFace were adjusted to obtain image embedding space
- Obtained the embedding vector of the specified image library and calculated cosine distance one by one to receive the final result
- Algorithm was scored 0.22+ and ranked 35 of 383

Google Smartphone Decipher Challenge, *Kaggle Competition (Bronze Medal)*   Jul 2021 - Aug 2021

- Extracted effective numerical features based on coordinate location and cell phone signal data
- Applied Kalman filters, LightGBM, and DBSCAN machine learning method to predict the longitude and latitude of mobile phone, to locate position on the highway when given any signal data
- Utilized outliers removal, mobile based SiteId's average, and Grid to Snap to process model's output
- Results were 4.2+ on public LB and 3.2+ on private LB, ranking top 10% in the competition