Yunli Liu

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Education

The University of Virginia, School of Engineering and Applied Science   Charlottesville, VA

M.S. in Computer Science   September 2021 – December 2022

Coursework: ML in image analysis, Human-Computer Interaction, Geometry of Data, Machine Learning, Software Analysis, and Application

Shanghai Maritime University, School of Information Engineering   Shanghai, China

B.S. in Computer Science and Technology   GPA: 3.54/4.00(Excellent graduation thesis award)   September 2017 - June 2021

Coursework: Python, C++, Data Structure, Machine Learning, Imaging Processing, and communication

Projects

1. **Ultimate AWS Certified Solutions Architect Associate 2021**   October 2021- December 2021

   - Learn the Serverless Fundamentals (Lambda, DynamoDB, Cognito, API Gateway) and Perform Real-World Solution Architecture on AWS
   - Decoupled applications: SQS, SNS, Kinesis, Active MQ, secured AWS Cloud using KMS, IAM Policies & SSM
   - Analyzed 10+ Solution Architectures (traditional & serverless) and master all the differences of Databases on AWS

2. **Make Package Typo squatting Attack Comprehensible for Non-expert Users**   October 2021- December 2021

   - Making a tool to help non-expert users to recognize the typo-squatted packages using **Python**
   - Searched for packages with similar names based on the pattern and checked the metadata of the inputted package, we analyzed 216, 548 packages from PyPI as of October 26, 2021, and 1077 of them are malicious package
   - Processed PyPI packages with known source code repositories and identified packages possibly created for squatting attacks
   - Studied the logs generated by the package installation to figure out the vital parts for the developers. leveraged dynamic analysis technique to generate concise installation behavior logs

3. **Handwritten Calligraphy Font Recognition System**   April 2019 - June 2020

   - Built a full-stack web app to allow users to recognize their handwriting and generate the user's handwriting font library Using **HTML**
   - Iterated a platform for Identification, collaborating with a group of 2 engineers to generate letter manuscript's function using Java and **SQL Server**
   - Tested software for bugs and operating speed, fixing bugs, and documenting the process to increase efficiency by 20%

4. **Multi-threaded File Transfer System**   January 2020 - June 2020

   - Optimized and implemented Multifile concurrent transfer system increased uploading files speed by nearly 100 times
   - Imported visual analytics and on the relationship between file transfer and efficiency through different strategies and Recorded work of each thread using **C#** and optimized the best thread in concurrent file transfer
   - Implemented multiple API interfaces to implement various functions, such as login verification, registration verification, initializing file information database using **MYSQL**, inserting information into the file information database

5. **Campus Residential Management System**   September 2019 - January2020

   - Build a campus dormitory management system using **C#** with partners to effectively save manpower and material resources, protect campus dormitory water and electricity safety, and improve school logistics management Adopting B/S architecture
   - Using **SQL Server** as the back-end database and **HTML CSS** as the front-end development tool, the system realizes the necessary functions such as system maintenance, dormitory management, student management, dormitory allocation, information query, etc. Its operation is simple, the interface is friendly, and the operation is relatively stable

Research

1. **Prediction of the stock market on LSTM modeling**   Shanghai, China   December 2020 - June 2021

   - Constructed an (LSTM) network, logistic regression model (LR), support vector machine (SVM) regression model, and analyzed the performance of different parameters to get the stock price prediction under the optimal parameters
   - Created deep neural network LSTM stock price prediction that combines deep learning and sentiment mechanisms

Skills

C/C++; C#; Python（Django）; JAVA; MATLAB; SQL (SQL Server, MySQL); AWS, Deep Learning, Pytorch.