Louis Chu

1206 W Clark St, Urbana, IL 61801 · (217) 377-7198 · louis.chu.lc@gmail.com

EDUCATION

University of Illinois at Urbana-Champaign Expected Dec 2019

- Master and Bachelor of Science in Computer Engineering Major GPA: 3.74 / Overall GPA: 3.5
- Minor in Computational Science and Engineering
- Major Courses: Data structures, Algorithms, Object-oriented programming, Distributed systems, Cloud Computing, Network programming, Database, Mobile and Web App development, Information Technology, Machine Learning and AI, NLP, HCI, IoT

WORK EXPERIENCE

Anheuser-Busch InBev Champaign, Illinois

Data Engineering internship Feb 2019-Present

- Developed data pipeline consuming satellite field crops data and blockchain assets transaction data (Python, Flask, MSSQL)
- Performed **test automation** on external API and developed **data modeling** pipeline based on prototypes (Swagger, Restful API)
- Organized **Azure DevOps** through **CI/CD pipeline**, configuring monitoring and increased computational efficiency by 20%

Morningstar, Inc. Chicago, Illinois

Software engineering internship June 2018-Aug 2018

- Designed and developed **JavaScript SDK** for Securities Web Service with **100K+ daily access** (ES6, Node.js, JWT, Npm)
- Implemented a streaming dividend calculation **backend pipeline** (AWS EMR, Apache Flink, Kafka, Java Spring, MySQL)
- Built a retirement product prototype for a business case study for increasing plan participation **300%** (HTML/CSS, ES6, Node.js)
- Refactored a JavaScript web component library into a **monorepo** and **improved 40% efficiency** (Lerna, Yarn, Webpack, Chai)

Jump ARCHES HCESC Simulation Lab Champaign, Illinois

Software engineering internship and research assistant May 2017-Dec 2018

- Developed educational **VR** software for medical training with real-world surgery simulation on Sepsis Study (C# .NET, Unity3D)
- Conducted high-frequency data transition pipeline, and customized **real-time interaction networking framework** (.NET, PUN)
- Created speech-based **AI** assistant with **natural language understanding and processing** (AWS Lambda, Alexa, Lex, Heroku)
- Researched on real-time object detection in robotic surgery using **deep learning and computer vision** techniques (Pytorch)

PROJECTS HIGHLIGHTED

Search Ads Web Service System Sept 2017-Nov 2017

- Created distributed web crawler which crawled 3M+ public product data from Amazon shopping website in Java, Jsoup, Proxy
- Designed and developed Search Ads Web services which support: query understanding, Ads selection from inverted index, Ads ranking, Ads filter, Ads pricing, Ads allocation in Java, Jetty, MySQL, MemCached, gRPC
- Reverse engineered search log with weighted random sampling algorithm in Python and Apache SparkMLlib
- Designed and implemented feature engineering pipeline which generates features for query understanding and click prediction with Apache Spark and python

IoT virtualization and management infrastructure platform Jan 2019-Present

- Implemented a web-based IoT virtualization platform which supports circuit/device/network simulation and auto-grading in Flask
- Designed and developed a single-page MVC web application for user tasks creation and management in React, Node.js, MongoDB
- Built distributed simulation executor which can build and execute user's code in Docker, researched on Kubernetes auto-scaling, docker resource management, collected logs using docker fluentd driver, and persisted logs in Kafka and outputted in WebSocket

Excited: HackCulture 2017 Data Mining and Visualization Tools April 2017

- Exported, transformed and loaded data (ETL) from DMI official dataset provide by UIUC Library Archives using Pig and Hive
- Implemented a data processing pipeline using Oozie, Sqoop, Pig, Hive, HCatalog and created a Hadoop web crawler using Nutch

Real-time running location monitoring and simulation System Aug 2017-Nov 2017

- Designed and developed a real-time running location monitoring system with Microservice architecture to decouple backend services such as running location persistence, distribution and update services
- Applied Microservices architecture using Java Spring Boot, JPA, Spring Data, Spring Cloud, RabbitMQ, MongoDB, MySQL, H2
- Developed the single-page web application using HTML5, CSS, AngularJS, RESTful API and Java WebSocket API
- Utilized Docker to containerize infrastructure and Maven, Hibernate to manage dependencies

SKILLS

- Programming language: Java, Python, JavaScript, C#, Verilog/System Verilog, SQL, PHP, C++, C, CSS, HTML5, R, Solidity
- Tools: AWS, Azure, Hadoop, Docker, Kubernetes, GraphQL, Maven, Unix/Linux, PyTorch, TenserFlow, TCP/IP, Github, Jira