

# XIAOYAN HUA

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## EDUCATION

### Tufts University, Medford, MA

Sep 2021 - May 2023

*Master of Science in Software System Development*

*Core courses: Software Engineering, Cyber Security, Cloud Computing*

### North China Electric Power University, China

Sep 2011 - Jun 2015

*Bachelor of Engineering in Electrical Engineering and Automation*

*Award: National Scholarship*

## WORK EXPERIENCE

### Arista Networks, Nashua, NH

May 2022 - Aug 2022

*Software Engineer (intern)*

- Worked with platform-independent software team in **SyncE** ( Synchronous Ethernet), focused on **extended quality level** to support new types of SyncE clocks and some other functionality
- Built parser in **attribute-oriented programming** of C++ to parse **ESMC** packet with extended quality level TLV
- Implemented all extended attributes passing through SyncE workflow and displayed in **CLI show commands**
- Enabled packet generator in SyncE system to generate and populate extended attributes correctly

### State Grid Jiangsu Electric Power Company, China

Aug 2015 - Jun 2021

*Electrical Engineer (full-time)*

- Participated in the development of an online abnormality detection application on renewable energy equipment to reduce customer-side carbon emissions
- Detected 121 abnormal devices with 97% accuracy from online data including power flow and line loss rate

## PROJECTS

### Simple Bank (Golang)

May 2022 - Jul 2022

- Established a backend web service of a mimic bank for customers to create, manage accounts and transfer money
- Designed the bank database schema of users and transfers in **Postgres** and handled deadlock in transaction
- Created RESTful APIs through **Gin** for loading app configs, handling errors, authenticating users with web token
- Constructed a minimal image with **Docker** and deployed it to a production Kubernetes cluster on **AWS**

### Developer Connector (JavaScript)

Dec 2021 - Feb 2022

- Developed a small full stack social network app that includes authentication, profiles and forum posts
- Built API routers through **Node.js** and **Express** in the backend connecting to database in MongoDB
- Introduced **JWT** web token to securely implement authentication for registered users
- Utilized **React** Hooks to call features and applied **Redux** for app state management in the frontend

### Java on Rails (Java)

Sep 2021 - Oct 2021

- Implemented a simple web server that uses a **model-view-controller** architecture in Java
- Applied Java **I/O** and **reflection** to establish an interior database and provide primitive database functionality
- Created controllers to handle multiple requests and support a basic CRUD interface
- Wrote web server functions listening and routing received requests, sending the result back

## TECHNICAL SKILLS

### Programming Language:

Java, C/C++, Python, JavaScript, Swift, Go, CSS, HTML, SQL, Matlab

### Framework & Developer Tools:

Node.js, Express, React, Redux, Spring Boot, Spring MVC, Git, Docker  
MySQL, MongoDB, AWS, Maven, Gin, Postman, Wireshark