CHIA-LIN (Charles) LIU

2F, No. 6 Heping Street, Hsinchu, Taiwan (R.O.C.) github.com/chialin-liu, charles.ee96@g2.nctu.edu.tw

SUMMARY: With more than 6 years' experience in IC design house, I am motivated by full stack web technologies and looking forward to contributing my talents on Node.JS/Java Spring

TECHNICAL SKILLS

Hardware Languages/Tools: Verilog, Perl, Design Compiler, Formal Verification, PowerArtist, Verdi, NC-Verilog, VCS, nLint

Software Languages/Framework: JavaScript (ES5/6), HTML5, CSS3, Java, React, Redux, SASS, Webpack, Node.js (Express), Spring family, MongoDB (Mongoose), MySQL, AWS, Redis, Jest

WORK EXPERIENCE

Senior Digital ASIC Designer, MediaTek Inc., Taiwan   Jan. 2019–Present

- Integrated conditional-access (**CA**) vendor-specific **security** IPs to achieve high-end **Pay-TV** market
- Improved functional test coverage up to 98% on the security IPs in Over-The-Top (**OTT**) chipsets
- Developed a secret key storage for managing different key generators
- Devoted to researching on low power hardware design to save more than 10% of power consumptions

Senior, Principal Digital ASIC Designer, MStar Semiconductor Inc., Taiwan   Oct. 2013–Dec. 2018

- Achieved a short-term reward by protecting secret keys from invasive attack in physical place & route
- Succeed to implement an advanced conditional-access chipset certified with a global security lab
- Enhanced hardware simulation platform to save 50% amount of working time by using **Perl**
- Focused on developing a secure crypto environment for set-top box chipsets toward **Pay-TV/OTT**
- Specialized in DVB MPEG transport stream protection using cryptographic algorithms (AES/TDES)

EDUCATION

National Chiao Tung University, Hsinchu, Taiwan   Sept. 2011–Aug. 2013
M.S. in Electronics Engineering, Overall GPA:3.68/4.3

National Chiao Tung University, Hsinchu, Taiwan   Sept. 2007–June 2011
B.S. in Electronics Engineering, Overall GPA:3.72/4.3

WEB PROJECT

Full Stack Web Application https://profile-connection.herokuapp.com/   Feb. 2019–May 2019

- Building a developer's social network with single page application (**SPA**) with **React** and **React Hooks**
- Developing an extensive backend RESTful API with **Node.js & Express**
- Protecting routes/endpoints with symmetric JSON Web Token (**JWT**) and verifying API with Postman
- Using **Redux** for managing reducer/action and applying **Redux-thunk** to resolve asynchronous actions
- Building a Responsive Web Design (**RWD**) with fluid grids and layout types for faster page load

Real-Time Chat Room https://chat-app-liuchialin.herokuapp.com/   June 2019–June 2019

- Designing a bi-directional communication between client and server using **Node.JS** and **Socket.IO**
- Users would be notified if a new user enters into or leaves the chat room

Spring Web Application   June 2019–Present

- Creating a web application with **Spring Boot**, **Spring MVC**, **Spring Data JPA**
- Utilizing Test Driven Development (**TDD**) with **Junit** and **Mockito**
- Leveraging the new **Reactive Types** inside the Spring Framework from the data tier to the web tier