

Chia-Yo Lin

14123 Rock Canyon Dr, Centreville. VA 20121
(480) 743 8945 | cyl@umd.edu | <https://chiayolin.org>

EDUCATION

University of Maryland, College Park

Expected Dec 2022

Bachelor of Science, Major in Computer Science; Minor in Statistics

- Overall GPA: **3.880**/4.000; Major GPA: **3.884**/4.000
- **Selected Coursework:** Computer and Network Security, Algorithms, Data Structures, Compilers, Database Design, OOP, Computer Systems, Programming Language Design, Linear Algebra, Calculus, and Statistics.

SKILLS

Languages: Python, Java, C, C++, Swift, Racket, Shell Script, JavaScript, HTML, CSS, OCaml, SQL, LaTeX, Assembly Languages, Ruby, SAS

Frameworks & Technologies: React, Express, Flask, Bootstrap, Pandas, NumPy, SciPy, SwiftUI, Linux, Unix, Node, Docker, PostgreSQL, MongoDB, Vim, Git, Jira, Grafana

EXPERIENCE

ForceTech, Inc — Industry 4.0 Automation

Nov 2020 — Jan 2022

Software Engineering Intern

- Designed and implemented a data pipeline integrating time-series data collected across multiple sensors. This is utilized by internal tools throughout the organization, cutting company's reliance on external contractor.
- Built a dashboard and alert system to help monitoring the production line in real-time. This resulted in a **20% increase in Key Performance Indicator (KPI)**.
- Worked with on-site engineers and relevant departments to tailor the software to their needs.

Q.P.T.I — Tech Startup

Jul 2020 — Oct 2020

Software Engineering Intern

- Ported RS-232 serial-port driver (via JNI) under Android for RK3399 SoC and implemented relevant APIs.
- Developed an Android app that is used by the EE team to test payloads via serial ports.
- Helped the EE team to bridge the Android board with payloads such as servos and other MCUs.

UMD Institute for Advanced Computer Studies — Research Institute

Sep 2018 — Aug 2019

System Administrator / Technical Staff

- Resolved JIRA tickets with technical issues, such as server problems reported by Splunk and/or faculties.
- Fulfilled requests from labs of allocating data center's computing resources such as GPUs and storage spaces.
- Improved and implemented shell scripts automating the auditing of various services and UNIX administration.

PROJECTS

ATM-Bank Protocol Emulator

Emulator for the secure connection between an "ATM" and a "bank" using AES-256 in Galois/Counter Mode, authenticated/verified with GMAC and ephemeral session tokens, mitigating MiTM attacks such as replay attacks. Utilized C, Unix IPC sockets, and OpenSSL library.

Expenses Manager

A 3-tier full-stack web app that uses React on the frontend, a RESTful backend built with Node and Express, and a MongoDB database.

TikTok Clone

Striped-down clone of TikTok using SwiftUI and Firebase Realtime Database that allows user to share and "like" videos such that the uploaded videos are displayed in a "feed" according to some sorting heuristic.

Lisp Compiler

Compiler written in Racket that compiles a Lisp dialect from an AST representation to x86 assembly language, including a custom runtime written in C.