

# Minghui Liu

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## EDUCATION

### TRINITY COLLEGE

#### BS IN COMPUTER SCIENCE

Expected May 2017 | Hartford, CT  
Phi Beta Kappa  
Dean's Scholar  
Faculty Honor (All Semesters)  
Cum. GPA: 3.94 / 4.0

## LINKS

Github:// [kevinlmh](#)  
LinkedIn:// [minghuiliu95](#)

## COURSEWORK

Data Structure + Algorithms  
Operating Systems  
Computer Network  
High Performance Computing  
Computer Security  
Programming Languages  
Convolutional Neural Networks  
Computer Graphics

## SKILLS

### LANGUAGES

Fluent:  
C • Python • Java • CUDA  
Familiar:  
Assembly • Shell Script  
JavaScript • HTML • CSS

### PLATFORMS AND TOOLS

Unix/Linux • Android  
Node.js • Express • MongoDB

## EXPERIENCE

### VERTAFORE | SOFTWARE DEVELOPEMENT INTERN

Summer 2016 – Winter 2016 | Windsor, CT

- Designed and implemented RESTful backend of TLP, a template management web application, using C# .NET and MongoDB to replace deprecated desktop solution AMS Word.
- Maintained the existing code and fixed bugs for Sagitta, a large user base web application, and provided timely analysis and solution for customer reported bugs.
- Identified and mitigated critical security vulnerabilities, including cross-site scripting and elevation of privileges, in Sagitta and improved product security.

### TRINITY HPC RESEARCH LAB | UNDERGRADUATE RESEARCHER

Summer 2014 - Fall 2016 | Hartford, CT

- Researched the design and development of parallel hypergraph matching algorithms on GPUs.

### TRINITY COLLEGE CS DEPARTMENT | TEACHING ASSISTANT

Spring 2014 – Fall 2015 | Hartford, CT

## RESEARCH

### HYPERGRAPH MATCHING ON GPUS | C, CUDA, THRUST, OPENSURF

- A CUDA implementation of the Probabilistic Hypergraph matching algorithm on Nvidia GPUs.
- Achieved 10x+ speed up for large datasets compared to CPU implementation. Presented [result](#) at GPU Technology Conference 2015.

## PROJECT

### TIN WEBSERVER | C, PTHREAD, BSD SOCKET

A multi-threaded web server that supports both static and dynamic contents. It has a one-thread-multiple-active-clients architecture implemented using a thread-pool and handles large number of concurrent requests.

### PYTHON AES-256 LIBRARY | PYTHON

A python implementation of the Rijndael cipher with 128-bit block size, 256-bit key size and three modes of operations: ECB, CBC, OFB.

### RECYCLABLE? | IOS, SWIFT

An iOS image recognition recycle guide that lets you take a picture of an object and receive its recycle information. Recyclable? won 1st place and best environmental friendly app award at HampHack hackathon.

### LEMON WEATHER | ANDROID, JAVA, SQLITE

An Android weather app with beautiful lemon theme. Core features include hourly and daily weather forecast for multiple cities, customizable notification and unit conversion.

### YAMP | JAVA, SWING

A cross-platform music player. Core Features: old-school Winamp like interface, common audio format playback, ID3 tags, album cover, time sync-ed lyrics, equalization and two built-in visualizers.