

DUO TAO

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github.com/taoduo

duotao.space

EDUCATION

Carleton College (Liberal arts college in Northfield, MN) (2014 - 2018)

B.A. in Computer Science, B.A. in Physics with a concentration on Math

Cumulative GPA: 3.843 / 4.000

2015 - 2016 Dean's List (top 10% of class)

CS Courses: Algorithms, Audio Programming, Data Structures, Database Systems, Parallel and Distributed Computing, Programming Languages, Software Design

WORK

Electronics Lab Assistant @ Carleton College Physics Dept. (Sep 2016 - present)

- Research on technologies related to campus projects such as establishing secure P2P Wifi bridges for the data collection / distribution of Carleton weather tower.

Data Analysis Research Assistant @ LIGO Scientific Collaboration (Apr 2016 - present)

- Developed a full kit of Linux scripts / software that optimized the search of noise sources
- Designed and implemented an algorithm that optimized the grouping of noise lines in Java
- Accelerated the data visualization by 10 times with an algorithm implemented in MATLAB
- Automated the file operations by building a GUI software in Objective-C
- Supervised by Dr. Nelson Christensen, contributed ~300 search results and 5 circulations

Full-stack Web Development Intern @ 91 JinRong (Nov 2015 - Jan 2016)

- Developed a stock analysis web app in Windows with HTML, CSS, Javascripts (Node.js) and MySQL, which provides timely analyzed data for the quantitative investment department every 0.5s
- Sped up data streaming by ~300 times by reinventing frontend and backend logic
- Commended by CTO as "capable of deep researching and quick prototyping."

PROJECTS

Hitshebooks.com (Jun 2015 - present) -Web app: Carleton textbook trading platform

A website for students to share the textbooks. Built with HTML, CSS, Node.js, Angular.js and MongoDB. Over 100 students and 200 textbooks registered in one week

Data Structures Visualizer (Jun 2016) -Mac app for learning data structures

Extensible Java software that visualizes the construction and operations of stacks, queues and heaps

Everyday Checklist (Jun 2016) -Mac app to track the completion of daily tasks

An Java (JavaFX) application to help me stick to my long term plans by tracking the daily completion

MIDI Song Writer (Mar 2016) -Mac music software that makes writing music so easy

GUI software made with Qt, written in C++, composes multi-track MIDI music intuitively

Light Seeking IoT Robotic Arm (Jan 2016) -Arduino Robotic Arm that posts info online

An Arduino robotic arm that posts its position on a static IP address available around the campus. Users can check the position, the brightness, or control the arm online. Coded in C and Javascript.

SKILLS

Experienced with Java, C++, Python, C, Mac, Linux, Windows, Web Development and SQL

HONORS & AWARDS

SpaceX Hyperloop Pod Design Weekend (115 / 1000+ teams selected to attend)

Andrew W. Mellon Broadening the Bridge Grant (Received as STOC Engineering Team)