YIDUO KE

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EDUCATION

Cornell University *B.S. in Computer Science (GPA: 3.8)* *class of 2021*

Object-Oriented Programming and Data Structures ⋄ Introduction to Analysis of Algorithms ⋄ Functional Programming in OCaml ⋄ Machine Learning ⋄ Computer Vision ⋄ Artificial Intelligence ⋄ Introduction to Computational Complexity ⋄ Probability Models and Interference ⋄ Linear Algebra ⋄ Discrete Mathematics

Stuyvesant High School *High School Diploma* *2014 - 2018*

Computer Graphics ⋄ Systems Level Programming ⋄ Software Development ⋄ AP Computer Science

WORK EXPERIENCE

Teaching Assistant *January 2020 - present*
Cornell University CIS Department *Ithaca, NY*

- Holding office hours to assist students in understanding course material and do homework
- Answering students' Piazza questions regarding course material
- Attending grading sessions to grade students' assignments and exams

Undergraduate Researcher *February 2020 - present*
Cornell University CIS Department *Ithaca, NY*

- Researching semi-autonomous to fully-autonomous image processing and machine learning methods to identify cell features indicative of centrosome amplification

IT Intern *July 2019 - August 2019*
NYC Department of Health and Mental Hygiene *Queens, NY*

- Re-imaged PCs and upgraded their operating systems
- Deployed PCs

TECHNICAL PROJECTS

Enigma Machine *https://github.com/yiduoke/Enigma-Machine*

- Implemented the Enigma Machine in OCaml
- Supports all features of the actual Enigma machine (rotor, reflector, plugboard, stepping, ciphering, deciphering)

Linux Shell *https://github.com/yiduoke/Systems-Project-01*

- Developed a bash shell very similar to the Linux Ubuntu shell that executes user commands
- Implemented in the C language

Graphics Engine *https://github.com/yiduoke/13Graphics-friday*

- Built a graphics engine in the C language that displays and animates 3D shapes and objects
- Reads mesh files to generate GIFs
- Supports various types of shading (flat, Phong, Gouraud)

TECHNICAL SKILLS

Languages	Python, Octave, OCaml, Java, C, C++
Front-end skills	HTML/CSS/Bootstrap, JavaScript/jQuery/D3.js
Back-end frameworks	Flask
Databases	MySQL/SQLite/MongoDB
Tools	Git, Linux(Ubuntu)
Embedded Programming	RISC-V Assembly, reverse engineering

LANGUAGES

English	native
Chinese (Mandarin)	native
German	intermediate; member of National German Honorary Society Δ Φ A