

# YIDUO KE

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## EDUCATION

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**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

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**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

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**Enigma Machine** <https://github.com/yiduokey/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/yiduokey/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/yiduokey/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

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

## LANGUAGES

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<b>English</b>	native
<b>Chinese (Mandarin)</b>	native
<b>German</b>	intermediate; member of National German Honorary Society Δ Φ Α