YIDUO KE

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EDUCATION

Cornell University *B.S. in Computer Science (GPA: 3.85)* *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 ⋄ Operating Systems ⋄ Mathematical Logic ⋄ Probability Models and Interference ⋄ Linear Algebra ⋄ Discrete Mathematics

WORK EXPERIENCE

Teaching Assistant – Introduction to Analysis of Algorithms *Aug 2020 - present*
Cornell University CIS Department *Ithaca, NY*

- Holding office hours to assist students in analyzing and designing algorithms
- Answering students' Piazza questions
- Attending grading sessions to grade students' assignments and exams

Software Engineering Intern *May 2020 - Aug 2020*
Raytheon *Riverdale, MD (remote)*

- worked in NASA's EOSDIS team
- wrote a user interface for NASA Earthdata using data from NASA's Common Metadata Repository
- wrote unit tests for my product to run against
- deployed my product using Atlassian Bamboo and AWS, thus going through the entire software development cycle

Teaching Assistant – Foundations of Artificial Intelligence *January 2020 - May 2020*
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 - May 2020*
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

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++, C#
Front-end skills	HTML/CSS/Bootstrap, JavaScript/jQuery/D3.js
Back-end frameworks	Flask, Node.js, Serverless, Unity
Cloud	AWS services
Databases	MySQL/SQLite/MongoDB
Tools	Git, Linux(Ubuntu), Atlassian Jira, Bamboo, BitBucket
Embedded Programming	RISC-V Assembly, reverse engineering

LANGUAGES

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