YIDUO KE

yiduoke2026@u.northwestern.edu
GitHub: yiduoke

PUBLICATIONS

An Algorithmic Approach to Address Course Enrollment Challenges *Biswas A., **Ke Y**, Khuller S., Liu Q. Accepted into FORC 2023*

◇ currently writing the camera-ready as of April 6th, 2023 ◇

EDUCATION

Northwestern University *Ph.D. in Computer Science* *class of 2026*

Kolmogorov Complexity ◇ Modern Discrete Probability ◇ Mechanism Design ◇ Combinatorial Optimization ◇ Approximation Algorithms

Cornell University *B.S. in Computer Science (GPA: 3.82, Magna Cum Laude, Dean's List every semester)* *class of 2021*

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

WORK EXPERIENCE

Teaching Assistant – Introduction to Analysis of Algorithms *Aug 2020 - Jan 2021, Feb 2021 - May 2021*
Cornell University CIS Department *Ithaca, NY*

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

Software Engineering Intern *June 2021 - Sep 2021*
Raytheon *Riverdale, MD (remote)*

- worked in NASA's EOSDIS team
- deprecated ECHO-Token usage in NASA's Common Metadata Repository legacy services software

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

Software Engineering Intern *June 2020 - Aug 2020*
Pacific Northwest National Laboratory *Richland, WA (remote)*

- worked in a team of 4 to develop a virtual reality app in Unity from start to finish
- implemented and addressed dynamic client requirements in the app
- met with clients every 2 weeks to present updates on development progress and gain feedback

Teaching Assistant – Foundations of Artificial Intelligence *January 2020 - May 2020*
Cornell University CIS Department *Ithaca, NY*

- Held 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

TECHNICAL SKILLS

Languages	Python, Octave, OCaml, Java, C, C++, C#, Julia
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