# Yuxin Deng

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## EDUCATION

**The Pennsylvania State University** — State College, PA
*Bachelor of Computer Science and Mathematics* — *May, 2022*
- GPA: 3.62/4.0
- Dean's list from FALL 2019 to FALL 2021
- LA of CMPSC 465 (Data Structures and Algorithms)

## EXPERIENCE

**Research Assistant** — Aug. 2021 – Present
*Crowd-AI Group, Pennsylvania State University* — *State College, PA*
*Advisor: Dr.Ting-Hao (Kenneth) Huang*
- Conducting a Conversational XAI System project enabling writing support to HCI-field paper, and an academic research of analyzing respond latency to crowd power system.
- Implemented an attribution performance function for conversational AI's learning model, and used Bert model and PyTorch processing input strings to enable embedding and linear layer, to support the web chat-bot explain classified labels on given inputs.
- Collaborate with another researcher, designed and prototype a human-in-the-loop, crowd-powered system for voice assistant by designing user experiment and survey, coordinating user interviews and analyzing output data.

**Education Product Research Intern** — Jun. 2021 - Sep. 2021
*Byte Dance* — *Shanghai, China*
- Designed mathematical contents of "Dali Fudao" Education Application. Used JSON to write 200+ Rules of matching the user's questions and designing practice problems for teaching materials. Problems created by each rule have over 85% matching rate with assigned labels.
- Wrote the report for "Dali Artificial Intelligent lamp" product's Question & Answer Interface, analyzed primary student's learning habits and popular learning products in the market.

**Software Development Engineer Intern** — Jun. 2020 - Aug. 2020
*Yunjin Culture Travel Technology Co.* — *Guizhou,China*
- Developed the sorting function (Java) of 1000+ shopping mall products according to the logic of categorizing products in the travel scenario by having a research with the group in competitive products which conducted functional sorting for"Where to go","Ctrip", and other travel shopping applications.
- Designed test cases in JSON with Postman to debug the online shopping mall searching port.

## PROJECTS

**Database Developing - Car Dealers Website** | *Linux, MySQL, HTML, PHP* — Aug. 2021 - Nov. 2021
- Collaborated with a team of undergrad students to design and develop a web for car dealers using Linux for remote implementation with the team.
- Designed a hierarchical tree database structure; implement insert and modify function based on the structure, and implement encoding and decoding tools on large-scale data.
- Designed and implemented the web application's layout with React front-end.

**MapReduce-Style Wordcount Application** | *C, Linux* — Jun. 2021 - Aug. 2021
- Implement a multi-threaded program dealing with race conditions by writing a word count application consisting of mapper threads and reducer threads.
- Optimize the degree of parallelism in the mapper stage and the size of the shared buffer to save execution time.

## TECHNICAL SKILLS

**Program Languages**: experienced in Python, JSON, MySQL, comfortable with C/C++, Java, HTML
**Data Science**:comfortable with R, Racket, Numpy, Scikit-Learn, PyTorch, Matplotlib
**HCI Research**: Controlled User Study, Qualitative analysis,Literature reviews, LaTex
**Operating Systems**: Ubuntu, Linux, MacOS, Windows, Shell Script