# Jing-Chen Peng

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## EDUCATION

### UNIVERSITY OF ILLINOIS URBANA-CHAMPAIGN

Studying Computer Science and Mechanical Engineering
BS May 2022 | Urbana, IL
Grainger College of Engineering
Dean's List
GPA: 4.0 / 4.0

## SKILLS

### PROGRAMMING

Python
C++
C
Java
Bash
Matlab

### CAD / CAE

Solidworks
Autodesk Inventor
Creo
ANSYS

## COURSEWORK

### UNDERGRADUATE

Data Structures
Computer Architecture
Linear Algebra
Numerical Methods
Multivariable Calculus
Introductory Differential Equations

## AWARDS

Tau Beta Pi - Illinois Alpha chapter

Dean's List - Fall 2019, Spring 2019

Illinois Engineering Achievement Scholarship

UIUC PULSE coding competition - 2nd place

## EXPERIENCE

### IBM | Backend Developer Intern

Summer 2020 - Current

- Work with Jenkins pipelines and shell script to automate performance tests
- Wrote and updated scripts in Python, Groovy, and shell script
- Worked with the OpenShift container platform

### UNDERGRADUATE COURSE ASSISTANT

University of Illinois at Urbana-Champaign
Spring 2020 - Current

- Help students learn basic computer architecture concepts in office hours
- Work on developing the course final project

### UNDERGRADUATE RESEARCH ASSISTANT

University of Illinois at Urbana-Champaign
Winter 2020 - Spring 2020 | Python

- Wrote code to generate Burger's equation problems and solve them
- Used a neural network (PyTorch) to predict if the solver would crash

### FINISAR | Mechanical Design Intern

Summer 2019 | Fremont, CA

- Used ANSYS Mechanical to perform analyses of fiber optic transciever modules under static, dynamic, and thermal loads
- Wrote python scripts to improve automation and result post-processing

## PROJECTS

### MINI MIPS COMPILER

Fall 2019 | Python/MIPS assembly

- Wrote a script to help generate MIPS assembly from "pseudo-MIPS"
- Implemented features: array syntax, saved register handling, arithmetic, imports, #define
- Used recursive descent to parse arbitrary math expressions.

### AUTO COURSE PLANNER

Fall 2018 | Java

- Command-line tool for generating course schedules
- Implemented a smart brute force algorithm inspired by simulated annealing to find the local minimum of a highly nonlinear and discontinuous function
- Helped me make my four-year plan to fill all requirements from CS and ME

## EXTRACURRICULARS

### ILLINI FORMULA ELECTRIC | Team Member

August 2018 to Spring 2020

- Led experiments in using latch clamping force to waterproof containers
- Optimized 4-bar linkage design by using Matlab code to find optimal pivot placements and lever lengths
- Designed new differential mount with improved adjustability