

# Joseph Cramer

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## EDUCATION

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### University of North Carolina at Greensboro (UNCG)

*B.S. in Computer Science (GPA 4.0)*

*B.S. in Biochemistry (GPA 3.96)*

**Greensboro, NC**

*Aug 2021 - Present*

### University of Southern Denmark (SDU)

*Study Abroad Program*

**Odense, Denmark**

*Feb 2023 – June 2023*

### Apex Friendship High School (AFHS)

*Academy of Engineering*

**Apex, NC**

*Aug 2016 - June 2021*

## RESEARCH EXPERIENCE

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### UNCG Biochemistry Lab

*Web development for rat lipidomic interactive data display*

- Working to develop interactive web application to display localized lipidomic data for mice
- Worked virtually and maintained clear, concise, and consistent communication with PI

**Greensboro, NC**

*Jan 2024 - Present*

### SDU, Biology Department

*Determined cell cycle effects of cancer drugs*

- Worked to grow and maintain Osteosarcoma cancer cells
- Utilized the Fucci system with fluorescent tagging to track real time protein data
- Verified the mechanism of action for cancer medications through real time cell cycle analysis

**Odense, Denmark**

*Feb 2023 – June 2023*

### SDU, Department of Green Technology

*Quantified variations in bioactive compounds in Rhodiola Rosea (RR)*

- Developed automated method for rapid data cleaning and analysis of HPLC UV-Vis Chromatogram data
- Analyzed data to quantify correlations between four bioactive markers and the geographic origin, portion of plant, and sex of plant
- Developed programs to generate graphs and figures automatically from the data with built in post-hoc analysis and significance testing

**Odense, Denmark**

*Feb 2023 – June 2023*

## WORK EXPERIENCE

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### TalentTelligent

*AI Intern*

As an AI intern I work closely with the CTO and upper management to prepare data for inclusion in an AI-enabled database. I am responsible for tagging data, providing support in assessing AI functionalities, and providing clear documentation of changes and progress to ensure a smooth transition of intellectual property into the embedded database.

**Greensboro, NC**

*Sep 2023 – Present*

### UNCG, CS Department

*Academic Tutor*

**Greensboro, NC**

*Aug 2022 – Dec 2022*

As an academic tutor I worked with the CS department to provide personalized support to students in their coding efforts. I was responsible for manning the CS lab, answering any questions, assisting with debugging code, and teaching problem solving to the students in the lab.

## ACADEMIC PROJECTS

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### Home Security Product Development

**Apex, NC**

*Project Lead*

*Feb 2020 – Feb 2021*

- Managed a team of engineers to design, prototype, and present a robust door security package
- Used AutoCAD to model and stress test proprietary deadbolt design
- Developed, 3d printed, and tested several deadbolt prototypes
- Led the team to present product, market analysis, and test data to board of engineers

### Nutrition Info Software

**Greensboro, NC**

*Project Lead*

*Jan 2024 – Present*

- Currently leading a team to develop a website and app that utilizes a database of products and ingredients to flag potential health hazards, allergens, or recalls
- Architecture will include an android app and webpage connected to the backend and database with python's Django

### Convolutional Chess Neural Network

**Greensboro, NC**

*Solo Project*

*Feb 2023 – Present*

- Used PyTorch and Lightning to develop and test a CNN to play chess
- Developed novel network architecture to better give relational data to the NN
- Developing new graphical representations for training progress
- Optimizing architecture and hyperparameters to decrease training time and data requirements

## SKILLS

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### Computer Skills

Proficient

Python	Microsoft Office (PowerPoint, Word, Excel)	Java
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Knowledgeable

Java Script	Autodesk (Inventor, Fusion 360)	SQL
HTML/CSS	LaTeX	PostgreSQL
3d Printing	Django	MATLAB

### Molecular Biology

Gas Chromatography	AAS (Atomic Absorption Spectra)	Western Blot
Ion Chromatography	DNA Amplification and Purification	Pipetting
Gel Electrophoresis	HPLC (high pressure liquid chromatography)	SDS-Page
UV-Vis Spectroscopy	PCR (polymerase chain reaction)	Florescent Spectroscopy

## HONORS AND ACTIVITIES

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- Eagle Scout (2021)
  - Freshman Project Performance Award (2017)
  - Speech and Debate (2015 – 2021)
  - Dean's List (2022 – Present)