Jaxson Gauthier

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Education

The University of Iowa | *Iowa City, IA* Anticipated May 2027
B.S.E – Computer Science and Engineering Cumulative GPA: 3.7/4.00
Relevant Coursework: Algorithms, Data Structures, Machine Learning, Deep Learning in Medical Imaging

Work Experience

Full-Stack Software Engineer Intern May 2025 – July 2025
TrickyLeaf | Milan, Italy

- Built scheduling and reviewing system for snowboarding mentors using **Node.js** and role-based access, with automated **SQL-backend** lesson booking and feedback
- Developed IoT system enabling remote control of lights using web-interface, and real-time gate lock detection using **OpenCV** integrated with a **RaspberryPi** physical backend and **AWS IoT**
- Appointed by supervisor to mentor a fellow intern; provided foundational training and ongoing support to ensure successful project execution.

Engineering Ambassador June 2024 – Present
College of Engineering | Iowa City, IA

- Hosted events tailored for over **2000** prospective high school students through a semester whilst acting as point of communication
- Organized and assisted in the implementation of college events including main admissions event hosting over **500** people.

Supplemental Instructor June 2024 – May 2025
University of Iowa | Iowa City, IA

- Facilitated collaborative learning sessions for students to enhance their course knowledge in "Introductory to Engineering Problem Solving"
- Hosted over **50** sessions assisting over **100** unique students over the course of the semester

Undergraduate RA – Bioimaging & Deep Learning November 2023 – Present
University Of Iowa, with Dr. Reinhard Beichel

- Research on quantitative PET/CT image analysis algorithms to evaluate and predict patient outcomes in head and neck cancer using TCIA data.
- Utilizing 3D Slicer to visualize volumetric imaging data and DICOM-RT structure sets in conjunction with clinical segmentations and radiomic features

Technical Projects

Frequent Listener

- Built web app where users guess songs from progressively reconstructed **FFT audio signals** using **Python** and **React.js**
- Designed **PostgreSQL** schema to track user stats, song analytics, and game progress across sessions
- Developed an admin interface using Spotify & YouTube APIs to search/download songs and generate FFT/Inverse FFT data

Mednote

- Developed full-stack web application using **Django** and **React** that allows users to upload doctor's notes and view a personal health timeline, including past visits, medications, allergies, and upcoming appointments.
- Integrated **spaCy NLP pipelines** to automatically extract key medical information (e.g., diagnoses, medications, allergies) from unstructured doctor notes and update the Django database accordingly.

Activities, Recognition, and Certifications

Electrical Engineering Undergraduate Scholar Award Fall 2023 - Present
Theta Tau Omicron Professional Fraternity August 2024 – Present
Supervised Machine Learning: Regression and Classification Deeplearning.Ai 2023

Skills

Technical: Python, Office 365, C/C++, NumPy, Pandas, Git, HTML/CSS, MATLAB, Pytorch, TensorFlow, SQL
Languages: English (fluent), Italian (proficient), Spanish (proficient)