

Benjamin Hardy

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EDUCATION

Texas A&M College Station, TX - Bachelors of Science, Computer Science

4.0 | Graduation Expected 2026

SKILLS

- Languages: Java, Python, C++, JavaScript, HTML, CSS.
- Frameworks: React JS, Python Flask, Java Spring Boot.
- Technologies: Microsoft SQL Server, SQL, Postman, Github, Microsoft Excel/VBA.
- Developing and integrating APIs and web services for seamless full-stack web development.

PROFESSIONAL EXPERIENCE

Software Development Intern

Highland Village, TX

E3 Integral Solutions

JUNE 2023- AUGUST 2023

- Optimized data extraction techniques through web scraping with Python requests, BeautifulSoup4, and Selenium to gather daily data for thermostats to increase data retrieval accuracy by 78%. Automated API calls to gather data using Perl.
- Architected a relational database using SQL to store and map collected thermostat data to report generation software, storing over 30,000 thermostat records daily.
- Automated and sent out dozens of daily reports generated using Macro Commander Pro, Microsoft Excel, and VBA.

Lifeguard

Plano, TX

City of Plano

JUNE 2022- AUGUST 2023

- Acquired and maintained proficiency in first responder skills such as First Aid and CPR to offer individuals in distress optimal support.
- Provided friendly customer service to guests and addressed concerns.

PROJECTS

Custom Notification Website

JUNE 2023 - AUGUST 2023

Developed a website to allow users to create their own custom notifications based on changes in other websites' contents.

- Built a RESTful API with Python Flask to accept JSON requests from the front end using React Js, CSS, and HTML and Axios. Included a login feature with JSON Web Token Authentication with Pyjwt, while implementing CORS for increased security.
- Deployed a relational database using SQLAlchemy to map different tables for users, desired notifications, and real time notifications.
- Utilized Python Requests, multithreading, and rotated proxies to optimize web scraping techniques. Integrated openAI API to generate notifications based on data collected from webpages' HTML properties.

Foot Controlled Computer Keyboard

AUGUST 2022 - JULY 2023

Constructed a fully functional computer keyboard designed to be used by the feet for individuals lacking upper body extremities.

- Constructed with an Arduino DUE, 2-axis analog joysticks, mechanical keys, resistors, other electronic circuitry, C++, and Python.
- Programmed an interfacing tool GUI using tkinter and ttkbootstrap which utilizes multithreading, serial port communication, and SQLite3 to allow the user to customize and locally save layouts for the way the controller enters in different keys.
- Conducted comprehensive testing and optimization efforts to test keyboard latency, enhance program storage space by 33%, memory utilization by 45%, overall product usability, and ergonomic comfort within the scope of the project.

Ocean Odyssey Platform Game

MAY 2023 - JULY 2023

Directed a team project building a full stack Java platform game.

- Built a Java Swing platform game from scratch including all animations, physics, and game states.
- Designed the program layout and managed gravity, collisions, and entity dynamics using complex classes and OOP principles.
- Implemented multithreading to produce dynamic and quick response gameplay.
- Established a REST API with Spring MVC and Spring Data using Java Spring Boot to provide information about each user's scores.

Language Translator Device

OCTOBER 2021 - DECEMBER 2021

Crafted a device to allow real-time language translation via audio input as well as image input of text.

- Constructed the device using a Raspberry PI Zero w, a USB microphone, an LCD screen, and a camera.
- Used voice recognition commands to allow for translation of any speech from another language into the user's language of choice by using Google Speech-To-Text API and Google Translate API.
- Implemented feature for device to take pictures of text and translate it by using PyTesseract Optical Character Recognition API.

AWARDS AND HONORS

- Ranked in the Top 10 people for the academic honor roll out of the entire AT&T Metroplex High School Hockey League.
- Awarded most improved player on Plano East High School Hockey team in the 2018-2019 JV season and 2021-2022 Varsity season. Led the 2022-2023 Varsity Team as an assistant captain.
- Played a key role on the Plano East High School hockey team in achieving back-to-back state championships.
- Awarded male rookie lifeguard of the 2022 summer at Jack Carter Pool.