Irfan Thomson

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EDUCATION

The University of Texas at Austin

Austin, TX

Bachelor of Science in Computer Science

May 2025

Experience

Code Ninjas

Coding Educator

August 2019 - February 2021

Coi

College Station, TX

- Guided and mentored 50+ students through coding curriculum that taught through creating games with Scratch, JavaScript, and Unity
- Debugged and graded hundreds of student programs and gave constructive feedback on their code
- Ran two summer camps: one for children's robotics and one for game tools
- Managed online coding classes during pandemic
- Participated in team meetings to discuss and implement improvements to curriculum and learning procedures

ACTIVITIES

Competitive Programming

August 2021 – Present

Austin, TX

- Biweekly online programming competitions
- Solved a variety of algorithmic and mathematical problems, improving problem-solving and coding skills
- Utilized data structures and algorithms, such as dynamic programming, graph theory, and number theory, to solve complex problems
- Developed efficient solutions and optimized code for time and space complexity

Projects

Software Engineering Team Project | React, Flask, AWS, Postman

- Built a dynamic, multi-page website using HTML, CSS, and JavaScript technologies
- Implemented server-side functionality using Flask web framework and MySQL database
- Created a Restful API with Postman
- Hosted using AWS Elastic Beanstalk, RDS, and Amplify

Creative Writing Database Website | React, Flask, AWS

- Built a dynamic, multi-page website using HTML, CSS, and JavaScript technologies
- \bullet Implemented a RESTful API with Flask webapp and a MySQL database
- Hosted from scratch on an AWS Lightsail instance with Flask and nginx servers

Operating System $\mid C$

- Contributed to the development of a custom operating system, including virtual memory allocation, system calls, and scheduling
- Implemented virtual memory management algorithms to support demand paging and swapping
- Developed system calls to provide process control and inter-process communication
- Designed and implemented a scheduling algorithm to manage the allocation of CPU time to processes

Real Time Object Tracker | Python

- Developed a real-time object tracking system using Raspberry Pi and OpenCV
- Utilized the Raspberry Pi camera module to capture live video feed
- Used OpenCV libraries for image processing, object detection, and tracking

TECHNICAL SKILLS

Languages: Java, Python, C, JavaScript, HTML/CSS Frameworks: Flask, MySQL, Postman, React, Node.js

Developer Tools: Git, Docker, VS Code, Visual Studio Eclipse, AWS