Bang Cao

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EDUCATION

University of Massachusetts Amherst   **Sep 2020 - May 2024**
Bachelor of Science in Computer Science

RELEVANT COURSEWORK

Computer Science: Algorithms and Data Structures, Theory of Computation, Software Engineering and Design, Linear Algebra, Operating Systems, Artificial Intelligence, Search Engine, Web Programming. Cryptography, Computer Vision

EMPLOYMENT EXPERIENCE

EyeQ Tech | Software Engineering Intern | Ho Chi Minh, Vietnam   **May 2022 – August 2022**
• Study and research Oracle Operat Property Management Service (PMS) to help hotels manages guests, rooms, and services
• Integrate Oracle Opera PMS to EyeQ's hotel kiosk app using C#, .NET, XML, SOAP, REST
• The kiosk uses face recognition technology to securely stored and retrieved customer data
• Implement a mirror screen functionality that allows the receptionist to help guests walk through processes such as checking in, checking out, order services, …
• Work with writing, and reading RFID cards as an optional function for the kiosk

SiGlaz | Software Engineering Intern | Ho Chi Minh, Vietnam   **Dec 2020 – June 2021**
• Build the backend server for a client company specializing in dermatoglyphics fingerprints using Java Spring, C#, .NET
• Stored and retrieve data using PostgreSQL
• Design and build UI/UX for the client Android app

PROJECTS

Search Engine | https://github.com/MorElf7/search-engine | Amherst, MA   **September 2022 – Present**
   Python
• An ongoing project that would produce a fully workable search engine
• Build search engine components: Porter Stemmer, Google's PageRank algorithm, and Boolean Queries
• Implement and improved PageRank algorithm runtime, from running in $O(n^3)$ to $O(n^2)$, tested on 5.6 million links
• Built an Inverted List to run Boolean Queries
• Implement and perform BM25 and Query Likelihood evaluation after generating the results

PostIt Fullstack App | https://post-it-fullstack.herokuapp.com | Amherst, MA   **July 2022 – August 2022**
   React, Redux, Node.js, Express, MongoDB, JavaScript, HTML, CSS, Bootstrap, Heroku, Git
• Source Code: https://github.com/MorElf7/post-it-fullstack
• A social media web app that allows users to sign up, log in, post images and text, follow/unfollow other users, as well as search for posts or users.
• Build backend using Node.js and Express, employing RESTful services, and storing data on Mongo Atlas.
• Build the app's frontend using React, Redux, and Bootstrap

PostIt Express App | https://post-it-social-media.herokuapp.com | Amherst, MA   **April 2022 – May 2022**
   React, Redux, Node.js, Express, MongoDB, JavaScript, HTML, CSS, Bootstrap, Heroku, Git
• Source Code: https://github.com/MorElf7/post-it-express
• A social media web app that allows users to sign up, log in, post images and text, follow/unfollow other users, as well as search for posts or users.
• Used Node.js and Express to build a server-rendered web app
• Authenticate users using session store

Find the Combo | Text-adventure Game | Amherst, MA   **February 2022**
   C/C++
• Source Code: https://github.com/MorElf7/Find-the-combo
• A text-adventure style game that was built using C
• The player would be traveling around the house with a total of 9 rooms. The player would need to identify the correct item, room, and character combination to win the game. Every play has only 10 tries.
• Played using the command line

TECHNICAL SKILLS

C/C++, JavaScript, Python, C#, .NET, Node.js, Django, React.js, Redux.js, HTML, CSS, Git, LaTeX, MongoDB, PostgreSQL