**NILESH BHOI**

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**Education**

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| Syracuse University | ***Master of Science in*** **Computer Science** | May 2024 |
| Indraprastha University | ***Bachelor of Science* *in*** **Information Technology** | August 2021 |

**Skills**

**Programming Languages:** Python, Java, JavaScript, Haskell, C/C++.

**Programming Skills:** Bootstrap, jQuery, Ajax, Node.js, Express.js, SQL, MongoDB, Layouts & Partials, Passport (JWT, oauth2), CSS, SCSS, Multer, NodeMailer, Socket.IO, React, Firebase, Redux, NumPy, Pandas, Matplotlib, RESTapi.

**Tools:** Linux, Eclipse, IntelliJ, VS Code, Git, WebStorm, PyCharm, Postman, Robo 3T, Firebase, Jupyter notebook, Spyder, Colab.

**Experience**

[**Teaching Assistant**](https://ninjasfiles.s3.amazonaws.com/certificate18858eaad2040aa7af4a1218f3d347328bde.pdf)**,** *Coding Ninjas, Delhi, India* March 2020 - July 2020 **(Java)**

* Acted as a mentor for individuals across India, regularly monitoring student performance.
* Aiding with any questions or doubts related to Data Structures and Algorithms.
* Total number of Doubts taken: 600 plus with rating: 4.7/5

**Coursework and related Projects**

[***Minor Project: Bitcoin Price P***](https://ijtre.com/wp-content/uploads/2021/10/2020080320.pdf)***rediction* (Python)**

* Employed deep learning techniques to predict the price of cryptocurrencies-(Bitcoin) to gain insights into future market trends.
* Analyzed the **time series of bitcoin prices** using advanced techniques such as Autoregressive-Moving-Average, Autoregressive Integrated-Moving Average (ARIMA), and Recurrent Neural Network (RNN) models to **gain insights into price trends**.

[***Social Media Website***](https://github.com/nilesh507/Nilesh_Bhoi) **(JavaScript)**

* Developed a fully responsive website utilizing the Model-View-Controller **(MVC) architecture** pattern.
* Featuring three layers of security checks implemented using PassportJS for **enhanced protection**.
* Pages are dynamically created (using layouts and views) and the Website's API is secured with **JWT Authentication**.
* Enabled users to **share photos** with captions and added features such as commenting and following capabilities.
* Enabled users to make friends with other users through a ChatBox-chat feature, which was implemented using the **Socket.io**.

***Major Project: Steganography* (Java)**

* Utilized a secure approach using spatial domain image steganography to **encrypt a secret message** **within an image**.
* Implemented a **Least Significant Bit (LSB)** algorithm for encryption within the application, utilizing Java programming language.
* Combined the cover image and encryption information into a stream of bits using **BitStream**, and vice versa for decryption.
* Utilized a **lossless compression technique** to encrypt and decrypt the cover image by breaking it up into individual bit-planes.

[***Movie-react-app***](https://github.com/nilesh507/Movie-App) **(React)**

* Developed a movie review application that allows users to **search for and discover new movies**.
* With add and remove functionality added to them in a personal favorites list.
* Utilized **RESTFUL API**-OMDB to retrieve movie information and data for the movies.

[***Cart-react-app***](https://github.com/nilesh507/Cart) **(React)**

* Designed a cart module with randomized items with **CRUD functionality** appended to them on the **firebase database**.
* Implemented component update lifecycle to efficiently update the state of items within the app, which is hosted on Firebase.

***Operating System* (C/C++)**

* Designed the system to read and process multiple user programs and schedule them using different scheduling methods.
* Implemented the ability to make **Unix system calls** such as read, write, yield, and exit within the application.
* Emulated RAM functionality by implementing virtual address to physical address translation management in NACHOS.
* Built a ready queue and scheduler effectuated with the timer interrupt service routine in a **multi-programming** environment.
* Designed multiple scheduling algorithms for processes/threads with variable time quantum for performance comparison.

***Structure Programming And Formal Methods* (Haskell)**

* Built a property testing model for random/automatic **property testing** for the Haskell Programs.
* Plot a deep **automated theorem proofer** with the goal to express access control policies and their ramifications.
* Utilized an access control matrix to determine the accessibility of requests made and set appropriate access controls.
* Bell-LaPadula security & Biba Integrity model were used to determine the grant of requests to ensure secure access controls.

**Graduate Coursework**

Design and Analysis of Algorithms, Operating Systems, Structure Programming and Formal Methods, Computer Architecture, Natural Language Processing, social media, and Data Mining, Object Oriented Programming.