

# Long Nguyen

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Motivated and recent Computer Engineering graduate equipped with a solid foundation in software design, development, testing, and data analysis. I am eager to leverage my broad educational background, coupled with exceptional analytical, technical, and programming skills, to excel in a junior software engineer role.

## EDUCATION

### York University

*B.Eng., Spec. Hons. Computer Engineering*

Toronto, ON

*Sep 2019 - May 2023*

- **Relevant Courses:** Design and Analysis of Algorithms, Introduction to Database Systems, Fundamentals of Data Structures, Object Oriented Programming, Computer Vision, Introduction to Machine Learning and Pattern Recognition, Software Design, Computer Architecture

## EXPERIENCE

### Software Engineer Intern

May 2021 – Jan. 2023

*Assure Global Group*

*Toronto, ON*

- Developed and implemented a front-end web application using HTML/CSS and TypeScript
- Utilized back-end API calls to efficiently format and retrieve data for front-end web applications
- Collaborated with UI/UX designers and managers to determine the most suitable design system for each client
- Developed comprehensive test cases for a full-stack web application utilizing Node.js, JavaScript, TypeScript, and MySQL, resulting in a 95% test coverage rate

## PROJECTS

### tenlalong.com | *React, JavaScript, JSX, HTML, CSS*

May 2023

- Designed a personal website showcasing my personal experience using React, JavaScript, and HTML/CSS
- Created and formatted both animated and non-animated components to enhance user experience
- Implemented media queries to ensure proper front-end layout on all devices and usage scenarios

### Seam Carving | *Python, PyTorch, NumPy, Kornia, Computer Vision*

Feb 2023

- Developed a Seam Carving algorithm to resize pictures while preserving the important image content
- Implemented a Sobel filter in Kornia's SpatialGradient and applied the concepts of Dynamic Programming, matrix scoring
- Conducted performance testing to make sure the time complexity would be  $O(n \cdot \log n)$ , avoiding longer runtime

### RANSAC-based Image Stitching | *Python, PyTorch, NumPy, Kornia, Computer Vision*

Feb 2023

- Implemented a mosaic/panorama application using Python - compositing together a number of images with overlapping fields-of-view in a photography plausible way
- Constructed a mosaic based on affine transformation using either NumPy or Kornia/PyTorch libraries

### ImageBot | *JavaScript, Node.js, JSON, REST API, Discord.js, Replit*

Aug. 2022

- Created a bot that responds to specific commands with keyword triggers by sending corresponding images
- Implemented image retrieval and delivery functionality, enabling the bot to swiftly respond with an image upon user command
- Formatted images as responses for Discord by implementing image rendering and embedding functionality

### Everyday HSA CRM, Vyniverse CRM | *TypeScript, JSON, REST API, HTML/CSS, Angular*

Jul. 2022

- Completed front-end development tasks for customer service and NFT gaming manager website for Assure Global Group
- Made back-end API calls to format the data to the front-end websites
- Collaborated closely with UI/UX designers to ensure the web template aligned with modern design principles and trends
- Conducted thorough testing on the buttons to verify their functionality and behavior, ensuring they respond accurately and reliably to user interactions

### SmartShoppers Web Application | *Java, Java Swing, MySQL*

Mar. 2022

- Developed a Java GUI-based store managing application for administrators, managers, and users
- Presented information system customized for each user
- Implemented the application using Java and MySQL

## TECHNICAL SKILLS

**Languages:** Java, JavaScript, TypeScript, HTML/CSS, Python, C/C++, MySQL, MongoDB, Shopify Liquid

**Frameworks:** Angular, React, Node.js, Java Spring, JUnit, Jupyter, Chai, Mocha, CircleCI, AWS

**Libraries:** Panda, NumPy, PyTorch, Matplotlib, Seaborn, OpenCV, Kornia, Scikit Learn, TensorFlow, NLTK