

# Brian Nguyen

Bellevue, WA | (920)-860-0071 | [briannnguyen1210@gmail.com](mailto:briannnguyen1210@gmail.com)  
<https://www.linkedin.com/in/briannnguyen1012/> | <https://github.com/briannnguyen1210>

## OBJECTIVE

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Recent graduate candidate for a Bachelor of Science in Electrical Engineering at the University of Washington seeking a software engineering opportunity.

## SKILLS

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**Programming:** Java, Python, ReactJS/ReactNative, Javascript/CSS, C/C++ (Visual Studio, Arduino), Linux, MATLAB.  
**Concepts:** Data Structures and Algorithms, Object-Oriented Programming, Database (Pandas, MySQL), AWS Cloud (SageMaker, Lambda, Kinesis Stream, Alexa Skill, S3), Website/Mobile App Design (Front-end)

## EDUCATION

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### UNIVERSITY OF WASHINGTON

Seattle, WA

*Bachelor of Science in Electrical Engineering (3.85/4.00 GPA)*

*December 2020*

- **Concentrations:** Digital Signal & Image Processing
- **Related coursework:** Data Structure & Algorithm, Intermediate Software Development Concepts and Tools, Artificial Intelligence for Engineers, Capstone Project with Amazon AWS

## WORK EXPERIENCE

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### Sonic Concepts, Ultrasound Imaging Engineer Consultant | Bothell, WA

*June 2021 – January 2022*

- Implemented imaging algorithms specifically for a custom-made miniature transducer to detect spinal cord injury.
- Integrated imaging scripts in a third-party Verasonics Vantage ultrasonic system to perform image scanning.
- Optimized the transducer performance by improving SNR, CNR, speckle pattern, etc.
- Made important decisions and plannings on how to test the transducer performance and present the information to clients.

### Philips Healthcare, System Design Engineer Co-op | Bothell, WA

*June 2020 – December 2020*

- Developed ultrasound software with a distortion correction application to improve ultrasonic imaging (Matlab & C++).
- Designed a deep-learning model to perform distortion correction on ultrasound images (Python).
- Implemented a computational SVD-filter software feature on CPUs of the ultrasound system (C++).
- Developed data analytics scripts by performing data extraction and aggregating from large datasets to find software & hardware insights to improve future ultrasound systems. (Python)

### UW Molecular Imaging and Therapy Center, Systems Engineering Intern | Seattle, WA

*May 2019 – June 2020*

- Developed contrast-enhanced scripts from Verasonics Vantage software to get perfusion and flow images (Matlab)
- Designed 3D rendering volume model for image acquisitions of rat spinal cord (Matlab).
- Created a friendly UI to study features and characteristics of spinal cord injury from ultrasonic imaging (Matlab).

## PROJECTS

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### Yelp Review Upvote Prediction | Artificial Intelligence and Data Science

*October 2020 – December 2020*

- Extracted and preprocessed the large Yelp Review datasets (5-year datasets) to obtain desired features for the prediction.
- Designed a Neural Network machine learning model to take the features as inputs to predict the number of upvotes the Yelp review gets. (Python)

### Amazon AWS DeepLens, Software Engineering Team Lead | Seattle, WA

*January 2020 – June 2020*

- Designed a shape detection model for a deep-learning video camera AWS DeepLens to identify an object by a drawing.
- Developed the entire voice interface Alexa Skill using AWS Lambda to interact with the Alexa Echo Device to play the game.
- Integrated an edge detection algorithm to perform pre-processing of the input data (drawings on a whiteboard) to crop the regions of the drawing for the deep-learning model.