# Nihar Dwivedi

Software Engineer

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Specializes in the design and implementation of scalable high-performance distributed systems.

## EDUCATION

### BOSTON UNIVERSITY

M.S. Electrical and Computer Engineering | Sep 2019 - Jan 2021

- GPA: 3.44/4.0
- Relevant Coursework: Cloud Computing, Parallel Algorithms, Advanced Data Structures, Deep Learning

## WORK EXPERIENCE

### SECURONIX, INC.

Associate Cloud Security Engineer, Cloud Engineering | June 2021 - Present

- Worked on a complex distributed cloud product
- Team responsible for data ingestion, regularly handled incidents and tickets
- Gained experience working with Redis, Kafka, Spark, HDFS, HBase, Solr, MySQL.

### RED HAT, INC.

Student Developer | Jan 2020 - May 2020

- Implemented novel ML model for a containerized metric alert application on the Mass Open Cloud.
- Leveraged OpenShift container platform to deploy Grafana and Prometheus-based app.
- Developed and deployed LSTM model on JupyterHub using Python.
- Obtained good predictions of chosen cloud metrics, comparable to Prophet model by Facebook.
- Pull request merged into main Red Hat project repository after code review.

### DELOITTE

Software Engineering Intern, Risk and Financial Advisory | Jan 2019 - May 2019

- Shipped backend PowerShell and SQL code improving accuracy of widely used internal system audit tool.
- Shipped JavaScript and C# code to implement new features for web-based frontend.
- Maintained and extended user documentation.
- Extended audit coverage of tool by 20%, added new features, and improved usability.

## PROJECTS

### IMAGE CAPTIONING

Course Project at BU EC523 Deep Learning | Oct 2020 - Dec 2020

- Explored state-of-the-art deep learning models for Image Captioning - generating a descriptive caption for an image.
- Implemented Transformer model and compared performance with other widely-used captioning models.
- Tested and trained model on the Coco 2014 dataset.
- Led training and performance testing of the Transformer model, comparison with reference Resnet and VGG models, achieved near state-of-the-art results with model tuning.

### LANGUAGE CORRECTION

Course Project at BU EC504 - Advanced Data Structures | Jan 2020 - April 2020

- Project to generate correctness scores for user-given sentences in a language.
- Scraped English text from Wikipedia and built a language model from word associations.
- Built GUI and Backend using Java, wrote parallel algorithms for efficient scraping and crawling.

## ADDITIONAL

- **Skills:** Cloud Engineering, Cross-Platform Development.
- **Languages:** (Fluent): Python, (Experienced): Java, C++, SQL, (Learning): Go
- **Tools and Frameworks:** Git, AWS, Shell Scripting, Redis, Kafka, Spark, HDFS, HBase, Solr