

# Luke Roche

SOFTWARE ENGINEER · LEARNING ENTHUSIAST

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## Education

### Rutgers University

B.S. IN COMPUTER SCIENCE AND B.A. IN PURE MATHEMATICS

Related Coursework: Calculus I-III, Introduction to Artificial Intelligence.

New Brunswick, New Jersey

January. 2018 - Expected May. 2020

### Kean University

B.S. IN COMPUTER SCIENCE AND B.A. IN MATHEMATICS

Related coursework: Data Structures, Assembly, Computer Architecture.

Union, New Jersey

Sep. 2016 - December. 2017

## Experience

### Natural Language Processing Research

UNDER DR. KAI WANG, SPONSORED BY LSAMP

- Computed the novelty of a document relative to 100,000 other documents with the same main topic.
- Implemented an algorithm to optimize populating and sectioning a graph with over 1,000,000 nodes.

Union, New Jersey

Sep. 2017 - Jan. 2018

### Virtual and Augmented Reality Research

UNDER DR. JENNY LI, SPONSORED BY STEMPACT

- Researched ability of virtual and augmented reality to be implemented and survive in the marketplace.
- Garnered 1st place in final evaluation when compared to every other CS researchers at Kean STEMPact.

Union, New Jersey

Oct. 2016 - May. 2017

### Code Samurai

TUTOR FOR KEAN UNIVERSITY

- Instructed students on complex topics in algorithms, OOP, C++, machine learning and other CS topics.
- Established solid foundations in over 500 students with rigorous exercises, discipline and persistence.

Union, New Jersey

Jan. 2017 - Jan. 2018

## Projects

### NLParallel

MACHINE LEARNING CONNECTION GENERATOR

- Generates a logical connection, using Natural Language Processing, between any two general topics.
- Scrapes, archives, and sorts data such that the algorithm can find connections between any topics.

New Brunswick, New Jersey

Aug. 2018

### A2B

HACKATHON PROJECT BUILT IN 24 HOURS

- Gives users the ability to use GoogleMaps, without internet, through SMS technology and Twilio.
- Accumulated both the 2nd place and Hackers Choice prize against roughly 200 other competitors.

Glassboro, New Jersey

Feb. 2017

## Skills

### Computer Science

LANGUAGES OR FRAMEWORKS AND SELF TAUGHT MATERIAL

- Java, C++, Python, C, R, LibGDX, Flask, TensorFlow
- Algorithms, Machine Learning, Pure Mathematics

## Societies & Committees

2017 **Volunteer** Major League Hacking - Hack Kean

New Jersey

2016 **Member** Association for Computing and Machinery

New Jersey

2016 **Member** RAM Scholars

New Jersey

2016 **Member** Association for Computing and Machinery - Women

New Jersey