Charles I. **Njoroge**

Engineer · Entrepreneur · Educator

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(815) 756-0893

Education

Computer Science Sc.B. — Providence, RI

Brown University

- **Cum. GPA:** 3.40/4.0
- **Courses:** CSCI 17/18 Integrated Introduction to Computer Science, AP Calculus, Discrete Structures/Probability, Linear Algebra, Applied Ordinary Differential Equations, Introduction to Computer Systems, Introduction to Software Engineering, Introduction to Computer System Security, Multiprocessor Synchronization, Computational Linguistics,Artificial Intelligence, Deep Learning, Embedded Systems

Experience

Software Engineering Intern — San Francisco, CA

Zillow Group : Trulia

- Implemented a real time pipeline within a 12-week period and integrated 10,000 new properties every minute into multiple indexes
- Utilized AWS, SNS, SQS messaging, Database technologies, and Java 6 / 8
- Experimented with machine learning technologies specifically Amazon Rekognition and Amazon Lex in python to achieve a universal
- properties search
- Learned the AGILE process with weekly stand-ups and biweekly sprints

Research Lab Assistant — Ann Arbor, MI

University of Michigan Robotics Research Lab

- Applied Quaternions, TCP sockets, the Robot Operating System (ROS) to build an RGB SLAM implementation.
- Performed different physics simulations in python to showcase varying integration methods. Specifically to highlight the differences between Verlet integration and Newtonian integration

CSCI 17: An integrated Introduction to Computer Science Head Teaching Assistant — Providence, RI

Brown University Computer Science

- Managed a course of 120 students and 20 undergraduate teaching assistants alongside 4 peers
- Over saw 5 key components of the course. Labs, Projects, Homework, Workshops, Office Hours with a focus on Lab and Workshops
- Worked 40 hours per week grading, overlooking assignments, leading meetings, and integrating new materials and concepts

CSCI 17/18 An integrated Introduction to Computer Science Teaching Assistant — Providence, RI

Brown University Computer Science

- Revamped test suites for a semester's worth of work including projects, labs, and homework
- Worked 20 hours per week grading 120 assignments with fellow Teaching Assistants
- Held labs along with 2 office hours sessions per week

Projects / Skills

Projects

- **Sequence to Sequence Model:** seq2seq model with an implementation of attention. Word to Word accuracy percentage: 79% after 1 epoch.
- **Convolutional Neural Network:** 3-layer mnist convolutional network with max pooling. 97% test accuracy.
- **Palantir Hackathon Prize:** Built a small application using Twilio to help users text for food stamp data, usually inaccessible to them because of required tech.
- **Deep Learning Research:** Re-implementation of Multiple Sclerosis (MS) lesion segmentation using cascading convolutional neural networks.

Skills

- Object Oriented Programming
- Amazon Web Services
- Neural Networks
- Computer System Security
- Quick Learner
- Machine Learning
- Deep Learning
- Functional Programming
- Network Security
- Arcade Games
- Educator
- Leader

Languages

- Java 8, Java 6, Python, JavaScript, Scala, OCaml, LATEX, C++, CSS, Bash, MySQL

Achievements

- **CODE2040 Fellow:** Learned tools and developed skills to become a more well rounded software engineer with a growth mindset as well as to thrive in the tech industry while helping destroy the wage gap and empowering other people of color.
- **CAARMS Poster Presenter :** Presented RGB SLAM robotics research at CAARMS Conference.
- **Brown University Palantir Hackathon Prize Winner :** Built application in python to make food stamp data more accessible.