

Kewen (Kolvin) Liu

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EDUCATION

Georgia Institution of Technology

August 2024 – May 2026

M.S. in Computer Science

Boston University

May 2023

B.A. in Statistic and Computer Science

GPA: 3.78/4.00

Technical Skills

Programming languages: Python, Java, Golang, C, R, SQL, MATLAB, JavaScript, HTML, CSS, Ocaml, etc.

Software Development: Docker, Git, Flask, React, Atom, Sass, jQuery, Karate

Machine Learning and AI: TensorFlow, Scikit-Learn, OpenCV, Tableau, Numpy, Pandas, Seaborn

Tools: MySQL, RStudio, Jupyter Notebook, LaTeX, Bootstrap, CodePen, VMWare, VS Code, CLion, PyCharm

RESEARCH AND PROJECT

Leadership and Mentoring Lab in the Wheelock College at BU | Boston, MA

Feb 2022 – July 2023

Data Analyst & Research Assistant

- Responsible for data cleaning, multivariate analysis, hypothesis testing, etc. using **R** on a large-scale dataset collected from nationally representative population sample to investigate the longitudinal educational and career trajectories of STEM students, comparing at the intersection of race, gender, social classes, etc.
- Assisted with grant writing and managed the training of fellow undergraduate RAs with academic and administrative support by assigning tasks, scheduling timeline, and holding meetings

Implementation of Distributed System Raft | Boston, MA

Feb 2023 – May 2023

GitHub: <https://github.com/KKolvin/Distributed-System>

- Developed **Raft** interface in **Golang** based on scholarly papers with **MapReduce** system to perform parallel computational tasks on seven virtual machines
- Performed system testing with **shell scripts** in **git** to achieve reliable data storage under condition of random server failures and system disconnections

Online Photo-sharing Social Media System | Boston, MA

Feb 2022 – March 2022

GitHub: <https://github.com/jiaQiu9/CS-460-PA1>

- Full stack development of photo-sharing website with **Python Flask**, **HTML/CSS**, and **JavaScript** managed with **NoSQL** database (**MySQL**) that allows users to register, browse and upload photos, interact with other users, manage posts and favorites, etc.
- Configured recommender systems for friend and photo recommendation with tag-based item-item algorithm and performed troubleshooting to ensure user experience and valid designs

WORK EXPERIENCE

Grader of CS330 Introduction to Analysis of Algorithm at BU | Boston, MA

Sep 2022 – May 2023

Course Link: <https://www.bu.edu/academics/cas/courses/cas-cs-330/>

- Graded homework for all students by checking their algorithm and pseudocode, providing detailed feedback, and dealing regrade requests

Sichuan Dongfang Water Conservancy Co., Ltd. | Chengdu, Sichuan, China

May 2021 – August 2021

Machine Learning Research Intern

- Applied Fast Fourier Transform to extract mechanical waves from noisy input with **Python** and **MATLAB**
- Supported project development of water pollutant detector model with computer vision algorithms using gaussian filter and non-max suppression with **OpenCV**

PUBLICATION

Activation Functions of Neural Networks | Remote

July 2020 – Oct 2020

Publication: Kewen Liu, "Analysis of Features of Different Activation Functions," 2021 2nd International Conference on Computing and Data Science (CDS), 2021, pp. 421-424, doi: 10.1109/CDS52072.2021.00078.

- Examined simple neural networks by reviewing research papers and built a hand-writing recognition network on MINST dataset with **Python** under the instruction by Dr. Minzhi Chen at Tsinghua University
- Authored a literature review to investigate mathematical features of commonly used activation functions and their respective performances in different network architectures

LEADERSHIP

Vice President: Boston University Data Science Association | Boston, MA

Nov 2019 – May 2023

- Hosted university-wide datathons in both Spring 2022 and Spring 2023 with collaboration of BU Data Science Department and other student organizations such as BU Sustainability and BostonHacks