

# Raluca Ghilea



mghilea@colgate.edu



(518) 605-6368



[www.linkedin.com/in/ralucaghilea/](https://www.linkedin.com/in/ralucaghilea/)

## SUMMARY

Senior Computer Science and Physics student and aspiring Software Engineer with experience in building scalable applications, UI design, and machine learning. Great collaborator and quick-learner, eager to explore new technologies.

## EXPERIENCE

**JUNE 2021 – AUGUST 2021**

**ENGINEERING SUMMER ANALYST INTERN – Goldman Sachs, New York, NY**

- Developed a REST API based microservice deployed on Kubernetes which leverages a relational database to remain truly stateless and enable seamless scalability
- Built production-ready code following software design patterns using FastAPI framework in Python
- Leveraged GitLab for Continuous Integration/Continuous Deployment (CI/CD) to ensure stability of the microservice
- Played crucial role in design discussions, collaborating with the team on evaluating trade-offs and identifying bottlenecks

**JUNE 2020 – AUGUST 2020, JANUARY 2021- MARCH 2021**

**RESEARCH INTERN – Argonne National Laboratory, Lemont, IL**

- Developed a Python-based application to streamline the data processing, analysis, and storage of real-time data
- Designed the Graphical User Interface using Qt design framework and PyQt5
- Led discussions with non-engineers on design features and data analysis functionality such as curve fitting (Levenberg-Marquardt algorithm), fast Fourier transform (FFT), and power spectral density (PSD)
- Implemented HDF5 data model to support efficient storage of complex datasets

**JUNE 2019 – MARCH 2020**

**RESEARCH ASSISTANT – Colgate University, Hamilton, NY**

- Developed Feedforward Classification and Regression Neural Networks using Keras and Tensorflow-GPU to identify patterns in complex spectra with an accuracy of 94%
- Built genetic algorithm and training datasets using Java to simulate real-life data
- Optimized hyperparameters, implemented regularization

## SKILLS

- |                               |                                |
|-------------------------------|--------------------------------|
| • Python, Java, C, C++        | • Cloud computing (Kubernetes) |
| • Linux, Windows              | • Numpy, pandas                |
| • Relational Databases (SQL)  | • REST API (FastAPI)           |
| • GitHub, GitLab              | • Keras, scikit-learn          |
| • Object-oriented programming | • CI/CD, DevOps lifecycle      |

## EDUCATION

**MAY 2022**

**COLGATE UNIVERSITY, Hamilton, NY - Bachelor of Arts, GPA 4.06/4.00**

- Double Major in Physics and Computer Science
- Dean's Award with Distinction, Charles A. Dana Scholar, Phi Eta Sigma Honor Society
- Organizations: Colgate Coders, Women in Computer Science, Wolfpack Urban Dance Group
- Jobs: Physics Research Assistant, Office of International Students Intern