Colleen E. Cleary

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❧ Software Engineer ☙

I am a passionate, driven, and curious software engineer and lifelong learner with a knack for problem-solving. With my background in physics and through my collaborative and independent computationally-based astrophysics research, I've developed a creative, yet practical approach to projects, as well as a keen eye for detail.

SUMMARY OF SKILLS

Tools and Technologies: Python (2.7/3.7), C++, Java, HTML, CSS, JavaScript, Django, Ruby, Angular, React, SQLite3, Mongo, Mongoose, Postgres, SQL, Git/Github, Slack, GIMP, Inkscape, Mathematica, MATLAB

Coursework: Advanced C++, Java, x86, Object-Oriented Programming, data structures, discrete mathematics, linear algebra, multi-dimensional calculus, numerical analysis, software development, web application architecture and servers, visual design and user experience

Bonus!: Quick learner, adaptable, highly motivated, enthusiastic problem-solver, awesome at time management and multi-tasking, strong collaborator and leader, excellent communicator (analytical, written, and verbal)

EXPERIENCE

American Museum of Natural History, BridgeUP: STEM   September 2018 - Present
Helen Fellow   New York, NY

Conducting astronomical scientific research using the museum's high-powered computer cluster to implement atmospheric retrieval code and model the complex chemistry ongoing in the atmospheres of brown dwarfs. I also lead a team of 6 high school students in their own Python and SQL based astronomy research project to format and ingest new data into an existing sqlite3 database and create 3D visualizations of the data with the museum's open-source planetarium visualization software, OpenSpace.

General Assembly Web Development Immersive   May 2018 – August 2018
Web Development Fellow   New York, NY

Participated in a full-time immersive Web Development course, completing in-class projects, hackathons, and personal projects focused on real-world applications of web development principles and best practices. Developed a portfolio of individually and collaboratively focused in-class projects, including Ghost-Neutralizer (an in-browser ghost hunting game), Women of STEM: Astronomy (a private online community for women in astronomy), and the Tipsy Tiki (an interactive tropical drink directory).

American Museum of Natural History   February 2016 - Present
Undergraduate Student Researcher   New York, NY

Created and developed Python algorithms for analyzing and modeling astronomical data (including high resolution cosmological simulations of black holes in dwarf galaxies, as well as brown dwarf photometry). Results presented at national conferences, as well as submitted for publication in the Monthly Notices of the Royal Astronomical Society. Additionally, served as programming resource to other students.

Midtown Comics   September 2010-June 2016
Assistant Manager   New York, NY

Trained and led team of over a dozen employees at the highly trafficked Grand Central location of New York's leading comic book retail chain, personally interacting with hundreds of return customers weekly. Established store policies, objectives, and procedures, and communicated with other managers daily regarding store-related matters. Traveled as a representative for international and local conventions, and remotely recruited, trained, and managed 4-6 volunteers per event. Implemented inventory system that reduced thousands of dollars in company losses.

NASA Goddard Institute for Space Studies   May 2015 – August 2015
Undergraduate Student Researcher   New York, NY

Led team of two high school students in creating a numerical simulation of an organic light-emitting diode to analyze the output efficiency due to various combinations of optical properties. Coordinated and led group presentation at relevant conferences in the New York area.

EDUCATION

Physics B.A. with minor in Mathematics (May 2018), City University of New York at Hunter College
Computer Science A.S. Candidate, City University of New York at LaGuardia Community College