

Francesco Grechi

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www.columbia.edu/~fg2403

Education

Columbia University

BA Math and Computer Science

New York, NY

Expected May 2020

- o Honors: Montone-Pardi Scholar, Class of 1939 Research Fellow
- o Courses: Advanced Programming (C/C++), Data structures (Java), Databases (SQL/Python), Graduate Probability Theory, Graduate Math Analysis & PDEs, Macroeconomics
- o Senior Thesis: "An Exploration of the Convergence of Equilibria in Mean Field Games"
- o Thesis Advisors: José Scheinkman, Marcel Nutz

The American School of Milan

IB Diploma (43/45), Valedictorian

Noverasco di Opera, Italy

June 2016

Computer skills

Languages: Java, C/C++, Python, Javascript, HTML, SQL, OpenCL/OpenGL

Tools: Linux/Unix, Git, Perforce, MySQL/Neo4j/Redis, Keras, PyTorch, Numpy/Scipy, \LaTeX

Experience

Columbia University Department of Economics

Research Fellow

New York, NY

May 2019 - August 2019

- o Researched encoding schemes of physical stimuli under Prof. Michael Woodford
- o Developed a mixture model and a β -VAE to simulate neural learning processes
- o Obtained a rigorous understanding of the Sklearn and Keras frameworks

Salesforce.com Inc.

Part-time Software Engineer

Software Engineering Intern

New York (Remote), NY

September-December 2018

May-August 2018

- o Exposed base components as lightning components using Salesforce's Aura framework
- o Learned to develop javascript and java controllers to correctly dictate the flow of information between browsers and Salesforce servers
- o Introduced slider, address input, and object-lookup components for Salesforce Flow usage

Columbia University Medical Center

Biomedical Informatics Undergraduate Researcher

New York, NY

Fall 2017 - Present

- o Assisted Prof. Adler Perotte in digitalizing the analysis of at-risk ICU patients' blood samples
- o Improved communication and time-management skills by taking up Slack and Google calendar
- o Reconstructed patient blood information from NIR Spectrographic data using Bayesian Inference mixed models

NVXL Technology Inc.

Software Engineering Intern

Fremont, CA

June-August 2017

- o Coded and optimized parallel OpenCL machine learning kernels for usage on Altera FPGAs
- o Researched the communication and computation costs associated with HPC AI software
- o Implemented a Winograd-based algorithm to reduce CaffeNet convolution complexity by a factor of 6.4

Extracurriculars

Columbia Math Department

Teaching Assistant

New York, NY

Spring 2019 - Present

- o Helped students with Modern Analysis I and Calculus III coursework

Columbia Venture Partners

VP of Partnerships

New York, NY

Fall 2017 - Spring 2019

- o Established a partnership program with NY based VC firms, hosting on-campus office hours

Interests: Triathlon, Running, Swimming, Soccer, Reading

Languages: Fluent in English and Italian, proficient in Spanish