Carlos Martin

carlos.martin@columbia.edu • carlosgmartin.com • github.com/carlosgmartin • linkedin.com/in/carlosgmartin

Education

Columbia University, BS in Computer Science, GPA 3.9 (Dean's List) — Expected May 2019
Minors: Applied Physics, Applied Mathematics
Relevant courses: Machine learning, artificial intelligence, neural networks, probabilistic graphical models, numerical methods, probability and statistics

Publications

Predicting the large-scale evolution of tag systems. *Complex Systems*, 25(2). — May 2016
Generation and analysis of lamplighter programs. Under review. arXiv:1707.02652.
Differentiable cellular automata. Under review. arXiv:1708.09546.

Experience

Summer researcher, Columbia University Robotics Lab — May – present
Developing reinforcement learning algorithms for robots that use EEG signals

Summer analyst, Goldman Sachs — Jun – Aug 2016
Created automated information retrieval and information extraction system

Software developer, Wolfram Research — Jan – May 2016
Created step-by-step educational problem-solving software for Mathematica

Summer researcher, Columbia University Lightwave Research Lab — Jun – Aug 2015
Researched parallel computing architectures and algorithms for photonic networks

Summer researcher, Wolfram Research — Jun – Jul 2015
Researched large-scale dynamics of cellular automata and tag systems

Summer researcher, TRIUMF national laboratory — Jun – Aug 2014
Researched laser ion sources and resonance ionization spectroscopy

Software developer, Appazur Solutions — Aug 2013
Created cross-platform app using Django, PhoneGap, Sencha, Mixpanel, Twilio

Volunteering

Student ambassador, Wolfram Research — Dec 2015 – May 2018
Organizing workshops and seminars on Mathematica and Wolfram Research

Board member, Columbia Data Science Society — Oct 2015 – May 2017
Organized data science and machine learning workshops and hackathons

Software developer, ADI Labs — Sep – Dec 2015
Created Bayesian online changepoint detection system for stream processor

Software developer, Columbia Organization of Rising Entrepreneurs — Sep – Dec 2015
Developed organization website using Flask, Bootstrap, Sass, Material Design

Secretariat member, British Columbia Model United Nations — Feb 2013 – May 2014
Organized multiple provincial conferences, developed organization website

Honors

Fluor Foundation scholarship — May 2016
Awarded for academic excellence to students enrolled in engineering programs

Egleston scholarship — Sep 2014
Awarded for extraordinary achievement as a student, researcher, and leader

Certificates of distinction in Pascal, Cayley, Fermat, Euclid, and Senior math contests — 2010 – 2014
Awarded by Centre for Education in Mathematics and Computing (CEMC)

TRIUMF national laboratory fellowship — May 2014
Awarded to students with passionate interest and demonstrated excellence in physics

Skills

Machine learning: neural networks, decision trees, clustering, graphical models, reinforcement learning
Programming languages: Python, Java, C++, JavaScript, Haskell, Matlab, Mathematica
Computational physics: electromagnetics, fluid dynamics, rigid body dynamics, Monte Carlo methods
Language proficiency: English and Spanish (bilingual), Mandarin Chinese (elementary)
Debate and public speaking: National Seminar (2012), Senior Nationals (2013), Oxford Cup (2014)