

Mia Chiquier
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Education:

- **Columbia University**, School of Engineering and Applied Science, Fall 2020-Present, New York
Degree: Ph.D.
Department: Computer Vision, GPA: N/A
- **University of Pennsylvania**, School of Engineering and Applied Science, 2015-2019, Philadelphia
Degree: Bachelors of Science,
Major: Computer Science, GPA: 3.64/4.00, Minors: Comp. Neuroscience, Mathematics, Systems Engineering
- **Washington International School**, IB Diploma, 2011-2015, Washington, D.C
IB courses: HL Mathematics (7/7), Physics HL (7/7), French Lit A HL, Chemistry, Economics, English

Teaching Experience:

- **Head Teacher's Assistant for Dynamical Systems**, September 2019-December 2019, Philadelphia
Instructed 75 students in Office Hours 3 hours a week, conducted 2 monthly Review Sessions, and coached students individually.
- **Barnard University Mentor for Women in CS**, September 2020-Present, New York
Teaching and mentoring undergraduate women at Barnard in CS, and computer vision specifically.

Research Experience:

- **Paper under Submission: Adversarial Attacks are Reversible with Natural Supervision**
Developed a method to reverse adversarial attacks on image classifiers, which we find also collaterally disrupt incidental structure in the image. We modify the attacked image to restore the natural structure, in turn providing a defense.
Authors: Chengzhi Mao, Mia Chiquier, Hao Wang, Junfeng Yang, Carl Vondrick
- **Paper under Submission: The Boombox**
Developed a method to use neural networks to predict a visual scene from small acoustic vibrations in a container.
Authors: Boyuan Chen, Mia Chiquier, Hod Lipson, Carl Vondrick
- **Researcher at the Reunion Island, University**, March 2020-August 2020, Reunion Island
Implemented machine learning algorithms to predict the short-term and long-term production of solar energy, as well as the consumption of electrical energy at various scales. These forecasts were used to optimize the integration of renewable energies into the smart grid of the Reunion Island.
- **Researcher under Dr. Jianbo Shi**, May 2019 - December 2020, Philadelphia
Developed sequential neural network models to predict the optical flow of vehicles' displacement on the road solely from the sound they emit, using data from a stereo recorder.
- **Google Explore Research Program**, November 2019 - November 2020, Philadelphia
Developed a machine learning pipeline for multilingual Natural Language Processing under supervision of Dr. Dan Roth.
- **Mathematics IB Thesis**, 2013-2015, Washington D.C.
Wrote mathematical proof based off of physics phenomena: "Mathematical Analysis of a Laser's Path as it Reflects Horizontally Off of Mirrors Arranged Vertically in Regular Polygons"

Internships: Deep Learning Intern at Heuritech (Summer 2018), Natural Language Processing Intern at AFI (Summer 2017), AI intern at Spirops (Summer 2016)

Awards: Columbia Center of AI Technology - Amazon Fellowship Recipient, Career Mathematics Achievement Award (WIS)

Tech skills: Pytorch, Keras, MatLab, Hydra, Ignite, Pytorch-Lightning, SQL, Html, Javascript, Python, Java, MatLab

Clubs: Advancing Women in Engineering, Women in CS

Other skills: Fluent (native) in French, Polish, and English; Spanish (Intermediate II), Pianist