Carlos Martinez

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Education

Georgia Institute of Technology
Master of Science
Electrical & Computer Engineering
Aug. 2016 – May 2018
3.6 GPA

New York University
Bachelor of Science
Mathematics
Sept. 2011 – Dec. 2015
3.7 GPA; Magna Cum Laude
Minors: Computer Science, Electrical
Engineering, Nuclear Science & Engineering

Employment

Assistant Research Technician
NYU Langone Medical Center, Cancer Institute
May 2014 – July 2016; New York, New York
Researcher for the Kirchhoff Lab specializing in cancer genetics. Responsible for data pipelines and statistical analysis of genetic sequencing using a high-performance cluster computing environment. Secondary responsibilities include grant and manuscript preparation, project presentations, and digital data storage.

Selected Projects

City Perimeter Detection - cmartinez.io/perimeter-detection/
Automatically detect the perimeters of cities from aerial images. A CNN detects roads in the image followed by image processing to expand the road network into a contour of the city. Tools used include **Keras with Tensorflow** for implementing a CNN, **AWS** for data acquisition, and **OpenCV** for image processing.

Toeing the Party Manifold – cmartinez.io/toeing-party-manifold/
Interactive 2- and 3D visualization of various dimensionality reduction techniques applied to US congressional voting data. Made with **Dash** and deployed using **Heroku**.

Publications

M. Vogelsang, **C. N. Martinez**, J. Rendleman, A. Bapodra, K. Malecek, A. Romanchuk, E. Kazlow, R. L. Shapiro, R. S. Berman, M. Krogsgaard, et al., "The expression quantitative trait loci in immune pathways and their effect on cutaneous melanoma prognosis," Clinical Cancer Research, 2016.

R. Ferguson, M. Vogelsang, E. Ucisik-Akkaya, K. Rai, R. Pilarski, **C. N. Martinez**, J. Rendleman, E. Kazlow, K. Nagdimov, I. Osman, et al., "Genetic markers of pigmentation are novel risk loci for uveal melanoma," Scientific reports, vol. 6, p. 31191, 2016.

Technical Skills

- Statistical data analysis and numerical computation: **NumPy, pandas, R, MATLAB, Excel**
- Machine learning libraries: **Scikit, Keras, Tensorflow**
- Interactive and static visualizations with **Dash**, **plot.ly, matplotlib, seaborn, ggplot2**
- General programming: **Python, C++, shell scripting**
- Equally comfortable in **Windows** or **UNIX**-based OS
- Basic web development and deployment via **Django** and **Heroku**
- Professional communication in technical formats (manuscripts, reviews, poster presentations, slide decks)

Conference Poster Sessions

American Society of Clinical Oncology (ASCO) 2017 Annual Meeting

R. Ferguson, D. Simpson, **C. N. Martinez**, M. Vogelsang, E. Kazlow, U. Moran, J. S. Weber, R. J. Sullivan, K. Flaherty, A. C. Pavlick, A. Ribas, I. Osman, and T. Kirchhoff, "Expression quantitative trait loci (eqtls) as germline determinants of melanoma immunotherapy response.," Journal of Clinical Oncology, vol. 35, no. 15 suppl, pp. 3017–3017, 2017.

D. Simpson, R. Ferguson, **C. N. Martinez**, E. Kazlow, U. Moran, A. Heguy, D. Hanniford, E. Hernando, I. Osman, and T. Kirchhoff, "Mutation burden as a potential prognostic marker of melanoma progression and survival.," Journal of Clinical Oncology, vol. 35, no. 15 suppl, pp. 9567–9567, 2017.

E. Kazlow, R. Ferguson, D. Simpson, **C. N. Martinez**, M. Vogelsang, U. Moran, Y. Lee, I. Osman, D. Polsky, and T. Kirchhoff, "Novel germline risk loci in familial melanoma (fm).," Journal of Clinical Oncology, vol. 35, no. 15 suppl, pp. 1535–1535, 2017.

ASCO 2016 Annual Meeting

(Presented) D. Hanniford, **C. N. Martinez**, I. Dolgalev, M. W. Lattanzi, E. V.-S. de Miera, E. M. Robinson, C. Goldman, A. Heguy, T. Kirchhoff, I. Osman, and E. Hernando, "Targeted next-generation sequencing of melanoma patient samples to reveal mutations in non-protein coding regions of targetable oncogenes.," Journal of Clinical Oncology, vol. 34, no. 15 suppl, pp. 9559–9559, 2016.

T. Kirchhoff, E. Ucisik-Akkaya, M. Vogelsang, K. Rai, R. Pilarski, **C. N. Martinez**, R. Ferguson, E. Kazlow, I. Osman, F. H. Davidorf, C. M. Cebulla, and M. Abdel-Rahman, "The identification of novel genetic risk loci in uveal melanoma.," Journal of Clinical Oncology, vol. 34, no. 15 suppl, pp. 1543–1543, 2016.

S. A. Weiss, **C. N. Martinez**, E. V.-S. de Miera, I. Dolgalev, R. L. Shapiro, A. Heguy, E. Hernando, T. Kirchhoff, and I. Osman, "Genomic characterization of acral lentiginous melanoma: Identification of altered metabolism as a potential therapeutic target.," Journal of Clinical Oncology, vol. 34, no. 15 suppl, pp. 9524–9524, 2016.

Academics & Certificates

Gates Millennium Scholar
2011 - 2018
Full-ride scholarship awarded by the Bill & Melinda Gates Foundation to minority high school students exhibiting academic promise and commitment to community service.

Deep Learning Specialization
March 2018
Deep Learning, a 5-course specialization by deeplearning.ai on Coursera