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## OMOJU THOMAS MILLER

### skills

Programming Languages: Python, C, C++, Ruby, HTML, Prolog  
Version Control Systems: Git

### projects

(All projects, including projects done for fun or in progress. Use bullet points to describe the projects. Include technologies used, your specific role and any measurable impact)

#### Student Intervention

Created supervised learning model to classify students needing intervention using jupyter notebooks, with scikit-learn, pandas and numpy python packages.

Implemented three supervised learning models: Decision Trees, Random Forest, and SVM.

Tuned SVM model to improve classification accuracy by 11.2% over Decision Tree bench mark.

#### Hiphopathy

#### Boston Housing Prediction

#### Investigating Why Historically Underrepresented Students Choose CS

#### Classifying undergraduate intro CS by gender

#### Vocabulary Glossary - Android Development for Beginners course

Created explicit mental-models to communicate computation ideas via verbal and nonverbal materials.

Co-Built Android For All Vocabulary Glossary for Android Development for Beginners course in partnership with Udacity.

#ThisIsGrit

## Semantic Web Expert System Shell (SWEXSYS)

### profession experience

#### *Experience*

(All experience, including volunteer and part-time. Include organization name, title, year, location. Add bullet points outlining your responsibilities and what you accomplished for the organization; especially quantifiable accomplishments)  
Chair Advisory Board, Learners Guild, Oakland, CA, December 2015 - Present.

### education

Nanodegree, Machine Learning, Udacity, 2016.

Ph.D, Computer Science Education, UC Berkeley, 2015.

Dissertation: *HipHopathy, A Socio-Curricular Study of Introductory Computer Science.*

M.S., Electrical and Computer Engineering, University of Memphis, 2004.

Thesis: *Semantic Web Expert System (SWEXSYS) Shell.*

B.S., Computer Science, University of Memphis, 2001.

### publications

#### *Conference proceedings*

Forthcoming. Omoju Miller. "Gaining Insights into the Effects of Culturally Responsive Curriculum on Historically Underrepresented Students' Desire for Computer Science." *Proceedings of the 123rd ASEE Annual Conference, New Orleans, LA.*

D.J. Russomanno, C. Kothari and O. Thomas. 2005. "Building a Sensor Ontology: A Practical Approach Leveraging ISO and OGC Models." *The 2005 International Conference on Artificial Intelligence, Las Vegas, NV* 637–643.

D.J. Russomanno, C. Kothari and O. Thomas. 2005. "Sensor Ontologies: From Shallow to Deep Models." *Proceedings of the 37th Southeastern Symposium on Systems Theory, IEEE Press, Tuskegee, AL* 107–112.

O. Thomas and D.J. Russomanno. 2005. "Applying the Semantic Web Expert System Shell to Sensor Fusion using Dempster-Shafer Theory." *Proceedings of the 37th Southeastern Symposium on Systems Theory, IEEE Press, Tuskegee, AL.* 11–14.

- O.A. Thomas and D.J. Russomanno. 2004. “[SWEXSYS: A Semantic Web Expert System Shell](#).” *Proceedings of the IASTED International Conference on Artificial Intelligence and Applications, part of the 23rd Multi-Conference on Applied Informatics, Innsbruck, Austria* 240–245.

#### *Workshops and Presentations*

- Jennifer Arguello, Tiffany Price, Alexis Martin, Frieda McAlear, Omoju Miller, Dan Garcia. 2015. “Engaging Underrepresented Youth in Computer Science.” *Computer Science Teachers Association (CSTA) in Grapevine, TX*.
- Omoju Miller. 2015. “Towards a Global Framework for Culturally Resonant Learning.” *2015 Sage Assembly in Paris, France*.
- Omoju Miller and Oluwole Solana. 2014. “From San Francisco to Johannesburg, introducing girls to Computer Science in Industry supported programs.” *2014 Grace Hopper Conference in Pheonix, AZ*.
- Daniel D Garcia, Brian Harvey, Tiffany Barnes, Dan Armendariz, Jon McKinsey, Zachary MacHardy, Omoju Miller, Barry Peddycord III, Eugene Lemon, Sean Morris, Josh Paley. 2014. “[AP CS Principles and the Beauty and Joy of Computing Curriculum](#).” *Proceedings of the 45th ACM Technical Symposium on Computer Science Education*, 746–746.
- Brian Harvey, Daniel D Garcia, Tiffany Barnes, Nathaniel Titterton, Omoju Miller, Dan Armendariz, Jon McKinsey, Zachary Machardy, Eugene Lemon, Sean Morris, Josh Paley. 2014. “[Snap!\(Build your own Blocks\)](#).” *Proceedings of the 45th ACM Technical Symposium on Computer Science Education*, 749–749.
- Omoju Miller, Jordan Arnesen, Eric Chu, Grayson Flood, Kevin Funkhouser, Alex Greenspan, Daniel Hsu. 2013. “Hiphopathy: A Computational Thinking Process to Encourage Empathy.” *2013 California Cognitive Science Conference, Berkeley, CA*.

#### *Essays and reviews*

- Frieda McAlear, Omoju Miller, Dan Garcia, Alexis Martin. 2016. “[Equity in Computer Science: From Exposure to Entrepreneurship](#).” *Computer Science Teacher’s Association (CSTA) Voice*, 9–10.
- Omoju Miller. 2014. “[Its Deeper than Rap, Toward Culturally Responsive CS](#).” *XRDS: Crossroads, The ACM Magazine for Students*, 28–30.
- Omoju Miller. 2013. “[Winning with Both Sides of the Coin](#).” *Coding Nation Report* 6–7.

selected  
conference  
presentations  
since 2012

- Keynote “15+ Years of Learning Computational Intelligence.” Annual OUSD Dinner with a Scientist, California, May 2016.

Invited panelist “SPIE Women in Optics.” SPIE Photonics West Annual Conference, California, February 2016.

Invited speaker “Breaking Barriers: Changing the Landscape.” Andela, Lagos, Nigeria, January 2016.

Invited panelist “Behind the Click: Intersection of Women of Color in STEM and Social Justice.” Black Girls Code, California, December 2015.

Keynote “Moonshot Thinking.” Joint Board of Advisors Meeting, Purdue School of Engineering and Technology, IUPUI, Indiana, October 2015.

Keynote “Breaking Barriers: Changing the Landscape.” Youth Start Up Weekend at Castlemont High School, California, May 2015.

Invited speaker, “Breaking Barriers: Changing the Landscape.” Office of Institutional Diversity, Harvey Mudd College, California, December 2014.

Keynote, “[Inventing the Mythical Creature: Or How to Stay, Lead, and Delight in Tech as a Woman.](#)” Annual Celebration of the IU Center of Excellence for Women in Technology (CEWiT), Indiana, October 2014.

Invited presenter, “Made With Code.” Annual Dreamforce Developer’s Conference, San Francisco, October 2014.

Invited presenter, “Inventing the Mythical Creature: Or How to Stay, Lead, and Delight in Tech as a Woman.” Focus 100, New York, September 2014.

Invited presenter, “#ThisIsGrit.” White House Department of Education EdData-Palooza, Washington DC, January 2014.

Invited panelist, “Social Justice in the Age of Big Data.” Swinging and Flowing: Inclusion and Diversity in the Age of Data. The Data and Democracy Initiative @ CITRIS Berkeley, Berkeley, April 2012.

grants,  
honors,  
& awards

Levo 100: Transformer, Levo League, California, 2015.

Bloomberg Beta Future Founder, Bloomberg Beta, California, 2014.

Winner, White House Dept of Edu EdDataPalooza, Washington DC, January 2014

Kapor Capital Fellows, California, 2012.

Invited participant, TEDxSummit, Doha, Qatar, 2011.

Google CS Grad Forum Scholarship, California, 2010.

SESAME Graduate Division Fellowship, UC Berkeley, 2010–2011

Herff College of Engineering fellowship, Memphis, 2002–2006.

press,  
podcast,  
& coverage

[Q&A with CS Ed Reformer and PhD Candidate Omoju Miller](#), Berkeley Bytes, March 11, 2014.

[Fortune-Tellers, Step Aside: Big Data Looks For Future Entrepreneurs](#), NPR’s All Tech Considered, October 5, 2014.

[African Americans on the role of Higher Education in Innovation](#), #BITTechTalk, December, 2014.

[RoadTrip Nation: Omoju's Open Road](#), Pivot TV, March, 2015.

[Redesigning Computer Science 101 Education with Omoju Miller](#), The Hanselman Minutes Podcast: Fresh Air for Developers, August, 2015.

[Learners Guild](#), [Investing in You to Code](#), HBCU to Startup Podcast, March, 2016.

[The Science of People in Tech](#), JavaScript Air Podcast, May, 2016.