Michael Neary

Curriculum Vitae

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Education

August 2015 — Present
M.S. Computer Science, *University of Maryland, Baltimore County (UMBC).*
- Research interests: CS Education, Artificial Intelligence
- Thesis topic: Intelligent Tutoring Systems
- Graduate Teaching Assistantship (3 semesters), 3.7 GPA

August 2012 — May 2015
B.S. Computer Science, *University of Maryland, Baltimore County.*
3.9 GPA, *Magna Cum Laude*

Employment

Aug. 2016 — Present
Instructor, *University of Maryland, Baltimore County.*
- CMSC 201: Computer Science I for Majors
- Deliver two lectures a week on various introductory CS topics
- Contribute heavily to the curriculum design, assignments, and exams

May 2016 — Present
Technical Intelligence Intern, *Hewlett Packard Enterprise.*
- Research various cutting edge machine learning algorithms and their applications
- Contribute to the development of the HP Labs Cognitive Computing Toolkit (CCT)
- Use the CCT to write machine learning applications.

June — July 2016
Graduate Teaching Assistant, *University of Maryland, Baltimore County.*
- CMSC 304: Ethical and Social Issues in Information Technology
- Led a few lectures on ethical issues related to cybersecurity and privacy
- Graded three essays (1200+ words ea.), a final paper (4000+ words), and a midterm

Jan. — Dec. 2015
Undergraduate Research Assistant, *University of Maryland, Baltimore County.*
- CS Matters in Maryland – http://csmatters.org
  - This NSF-supported project aims to develop a complete curriculum for the brand new AP Computer Science Principles course created by the CollegeBoard, and provide training and resources for teachers using this new curriculum. I researched and presented different Python-based tools for use in the course, and developed lessons for the data visualization unit in the curriculum.
- Transforming Undergraduate Education in STEM (TUES)
  - This NSF-supported project aims to increase confidence and retention rates among underrepresented students in computing majors. This was accomplished with a new introduction to computing course at UMBC. I performed data visualization to discover trends among response in student surveys.

Aug. 2015 — May 2016
Graduate Teaching Assistant, *University of Maryland, Baltimore County.*
- CMSC 201: Computer Science I for Majors
- Acted at Head Teaching Assistant, overseeing 40 undergraduate and graduate colleagues
- Administered the assignment submission system
- Wrote Python scripts to process grades for hundreds of students efficiently
- Contribute to assignment development
- Led a discussion section and graded their assignments

June — Aug. 2014 & 2015
Teaching Assistant, *Johns Hopkins University Center for Talented Youth.*
- Aided the instructor of Fundamentals of Computer Science for gifted secondary students
- Facilitated learning the classroom of basic computer science and programming topics
- Designed and delivered my own lessons and activities every night
- Developed a unique online content management system for the course http://github.com/mneary1/fcps

May — Aug. 2015 **Research Intern**, *Johns Hopkins Applied Physics Laboratory*.
- Researched coordination of distributed systems
- Designed a solution with Apache ZooKeeper for the coordination of machines in a distributed graph processing system.
- Implemented a web scraper for publicly available medical records to generate feature vectors for machine learning applications.

Jan. 2014 — May 2015 **Undergraduate Teaching Assistant**, *University of Maryland, Baltimore County*.
- CMSC 104: Problem Solving & Computer Programming (1 semester)
- CMSC 201: Computer Science I for Majors (2 semesters)
- Led discussion activities and graded assignments.
- Wrote automated grading scripts.

May — Aug. 2014 **Research Intern**, *Johns Hopkins Applied Physics Laboratory*.
- Researched cloud system development.
- Contributed to a lab-wide Infrastructure as a Service built in OpenStack for testing cyber tools.
- Wrote software tools or the automation of cloud related tasks.

June — Aug. 2013 **Program Assistant**, *Johns Hopkins University Center for Talented Youth*.
- Aide instructor of an Introduction to Robotics course aimed at 5^{th} and 6^{th} grade students
- Taught basic programming and robotics with Lego MindStorms NXT
- Planned daily activity, supervised during lunch and activities

Feb. 2013 — May 2014 **Tutor**, *UMBC Learning Resources Center*.
Provided one-on-one tutoring in all introductory level courses in Computer Science, Information Systems, Math, and Physics.

Publications

[1] **Cybersecurity: Exploring its Core Concepts through Six Scenarios**, *A. Sherman, D. DeLatte,* ***M. Neary****, L. Oliva, D. Phatak, T. Scheponik, G. Herman, J. Thompson*.

- This paper is to-be-published. It discusses several question prompts developed by the authors that are used to analyze common misconceptions undergraduate students have in cybersecurity.

Honors and Awards

2015 **Outstanding Graduate in Computer Science**, *University of Maryland, Baltimore County*.
Selected for this award for my dedication and leadership in the department while an undergraduate.

2013 **Meyerhoff Scholar Program Affiliate**, *University of Maryland, Baltimore County*.
Prestigious scholars program for underrepresented groups in STEM pursuing a Ph.D.

2012 **President's Distinguished Merit Scholarship**, *University of Maryland, Baltimore County*.
Earned this merit scholarship based on stellar performance in high school and on the SAT.

2012 **Eagle Scout (Bronze Palm)**, *Boy Scouts of America*.
Highest award in scouting, the culmination of a 10+ year career in the organization.

Extracurricular Activities

UMBC Dog-Collar Comedy Troupe.
I am a founding member of UMBC's premier improvisational comedy troupe. We host two shows a semester, as well as lend ourselves to various other performance engagements across campus during a semester.

UMBC Musical Theatre Club.
I have participated in every musical revue held in the fall semester, as well as the spring full musical.

Council of Computing Majors, *Treasurer*.
I served as the treasurer for this organization of fellow computing majors for one semester. Responsible for acquiring funds for activities such as a Raspberry Pi workshop.

Hackathons.
I have participated in MHacks, HackUMBC, and Hack The Planet. Projects from these events are available on my Github.

Up to 4 references available on request.