Marcus William Fedarko

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Education

Ph.D. Student, Computer Science   9/2018–Present
University of California, San Diego   San Diego, CA

B.S. with High Honors, Computer Science   9/2014–5/2018
University of Maryland   College Park, MD
GPA: 3.81/4.0

Conference Presentations

1. **M. Fedarko**, J. Ghurye, T. Treangen, and M. Pop. "MetagenomeScope: Web-Based Hierarchical Visualization of Metagenome Assembly Graphs." Poster presented at the *25th International Symposium on Graph Drawing and Network Visualization*, Boston, MA, USA, 2017.

Research Experience

Graduate Student Researcher   9/2018–Present
University of California, San Diego   San Diego, CA
- **Advisor:** Rob Knight
- Assisting in the visualization of metagenomic data.

Research Intern   6/2016–8/2018
University of Maryland   College Park, MD
- **Advisors:** Mihai Pop, Todd Treangen
- Designed MetagenomeScope, an interactive visualization tool for metagenome assembly graphs.
- MetagenomeScope's project page is available online at https://marbl.github.io/MetagenomeScope/.

Teaching Experience

Course Assistant   7/2018–8/2018
Marine Biological Laboratory   Woods Hole, MA
- **Courses:** Workshop on Molecular Evolution (MOLE); Strategies and Techniques for Analyzing Microbial Population Structures (STAMPS)
- Assisted with basic logistics for both courses.
- Helped students during some of the "laboratory" sections of the STAMPS course, including tutorials on Unix and Git.
- Prepared and gave a roughly hour-long presentation (including a tutorial) on MetagenomeScope during the STAMPS course as part of Todd Treangen's session on "Graph-based variant detection and strain-level analyses."

Undergraduate Teaching Assistant   8/2016–12/2016
University of Maryland Dept. of Computer Science   College Park, MD
- **Course:** CMSC 330 ("Organization of Programming Languages")
- Assisted students with coursework (Ruby, OCaml, Prolog; grammars, regular languages, semantics, security) in office hours and on an online discussion board.
- Designed and graded quiz and exam questions.

| **Professional Experience** | STUDENT STAFF WRITER | 1/2015–9/2017 |
| | **University of Maryland Dept. of Computer Science** | College Park, MD |

- Composed and edited some thirty articles published through the department's website, annual magazine `shell`, and other media.
- Assisted with the logistics of various department outreach functions, including hosting the robotics team from a nearby elementary school for a day at the department.

STUDENT INTERN — 5/2013–8/2014
Axiometric — Columbia, MD

- Designed a user-friendly graphical interface in Java to an RF propagation model to assist clients in planning deployments of mesh networks of utility meters.
- Aided in the creation and maintenance of other utility meter deployment management software.

INTERN SOFTWARE ENGINEER — 7/2012–8/2012
Battlefield Telecommunications Systems — Columbia, MD

- Designed a web interface using Python (Django), JavaScript, and HTML to monitor the connection strength of radio devices.
- Helped integrate this functionality into the company's existing network management user interface.

Honors and Awards

1. University of Maryland CMNS Dean's List — Fall 2014–Spr. 2018
2. University of Maryland Honors College University Honors Citation — 2017
3. Rita Colwell Travel Fellowship — 2017
4. Travel Award, U. of Michigan "Explore Graduate Studies" Workshop — 2017
5. John D. Gannon Endowed Scholarship — 2017
6. Corporate Partners in Computing Scholarship — 2016, 2017
7. Omicron Delta Kappa National Leadership Honor Society — 2016
8. Northrop Grumman Scholarship for Employees' Children — 2014
9. University of Maryland Dean's Scholarship — 2014