

Colin McLaughlin

p.mclaughlin.colin@gmail.com

(240) 997-5767

0147B Engineering Laboratory Building
linkedin.com/in/colin-mclaughlin-a80062135

Education

University of Maryland at College Park August 2020 – Present
Candidate for Master of Science in Civil Engineering
Advisor: Dr. Barton A. Forman

University of Maryland at College Park August 2016 – May 2020
Bachelor of Science in Civil and Environmental Engineering
GPA: 3.7 / 4.0

Work and Research Experience

National Institute of Standards and Technology (NIST) December 2019 – August 2020
Wildland-Urban Interface Research Team - Associate Data Analyst

- Transferred GUI analysis tools in MATLAB to App Designer using the App Designer Migration Tool.
- Edited MATLAB analysis tools to incorporate temperature and wind data.
- Programmed pop-up windows and other features to create a GUI environment able to be run by users unfamiliar with MATLAB software.
- Wrote users manuals for the analysis tools created in MATLAB.

Geo-technology Associates, Geotechnical Engineering Technician Intern May 2019 – August 2019

- Performed construction oversight and testing of soil, concrete, and asphalt samples.
- Communicated construction recommendations between project managers and contractors.
- Organized erosion and sediment control plans from 2009-2019 for every project undertaken by the office.

Living Canopies, LLC, Engineering Product Development Intern January 2018 – March 2019

- Designed and installed electrical circuits for the Living Canopy.
 - Created product specifications using Autodesk Inventor.
 - Wrote the electrical and irrigation system assembly instructions for the customer user's manual.
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Projects

Probabilistic Hazard Assessment Fall 2019

- Performed a Riverine Hazard Assessment using MATLAB and PeakFQ based on Bulletin 17C.
- Combined the Bulletin 17C results with a stream hydrograph and a depth-damage function to determine the risk of riverine flooding to nearby structures.

Transportation Engineering Design Project

Fall 2018

- Used Xpress solver software to develop a formulation for the optimal placement of dock-free scooters on the University of Maryland Campus.
- Created problem formulations using decision variables, constraints and an objective function considering student housing, popular student destinations, and the cost of scooter distribution.

Leadership Experience

University of Maryland Ultimate Frisbee A Team, Co-Captain and Treasurer

May 2019 – May 2020

- Planned and lead practice 3-4 days a week for University of Maryland's 30-player team.
- Oversaw the club's \$25,000 budget through the purchase of bid fees, equipment, lodging and transportation. Lead a sub-group that raised over \$8,000 through three different fundraising efforts.
- Coordinated University relations, workout regimes, season scheduling, and recruiting through daily communication with team, club sport supervisors, varsity athletic coaches, and ultimate frisbee programs across the country.

Propulsion Sub-group Lead – Introduction to Engineering Design

August 2016 – December 2016

- Collaborated with an interdisciplinary team of eight (8) peers to design and build an Over-Sand-Vehicle (OSV) that navigated to, detected, and extinguished two fires.
- Calculated the torque required to power the OSV and purchased the most cost-efficient motor.
- Presented a 25-page report and PowerPoint presentation to University of Maryland faculty that summarized the schematics, calculations, and code that built the OSV.

Computer Skills and Licenses

Proficient with: MATLAB, MicroStation, Microsoft Office.

Experience with: Visual Modflow, ArcGIS, Autodesk Inventor, Xpress, Adobe Illustrator, Path Finder, TauP.

Licenses: Maryland Civil Engineering in Training (EIT), Red Cross First-Aid and CPR/AED.