Alexander F. Rios

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EDUCATION

University of Illinois at Urbana-Champaign Urbana-Champaign, Illinois
- *B.Sc in Mathematics* *Expected Graduation Date: March 2020*
  Minor in Informatics

Wilbur Wright College Chicago, Illinois
- *GPA: 3.23/4.00* *Transferred 2017*

EXPERIENCE & ACADEMICS

- **Crop Sciences–Professor Bohn** Urbana - Champaign
  Corn Breeding Laboratory *May 2019 - Aug 2019*
  - **Data Entry:** Verify and enter data for inventory of corn in the laboratory.
  - **Breeding:** Made crosses between corn inbreds and created more inbreds for future use.
  - **Field Work:** Harvested and prepared corn roots for imaging.
  - **Root Analysis:** Began work on potential techniques for root analysis to be widely used as well as creating a framework to use the corn roots for research in tensegrities.

- **Psychology Lab–Professor Cheng** Urbana - Champaign
  Social Networks & Power Heirarchies *October 2018 - August 2019*
  - **Data Subetting:** Writing scripts in R to filter and subset data correctly.
  - **Data Visualization:** Using Gephi to visualize data; the work I am doing observes the relationship between friendships, advice sought, and respect.

- **Illinois Geometry Lab–Professor Hirani & Krishnan** Urbana-Champaign
  Search For New Tensegrities *September 2018 - May 2019*
  - **Research in Rigidity:** Defined different definitions of rigidity as a foundation for our research.
  - **Tensegrity Modeling:** Using Python and Sage, we are expanding a library of tensegrities that may be used for structural or biological applications.

- **ATLAS Internship–Professor Thornton** Urbana-Champaign
  Early Grade Writing Assessment (EGWA) *June 2018 - July 2018*
  - **Grading Protocol:** Developed a protocol to collect data on children's drawings; analyze and submit back with a grade.

- **Illinois Geometry Lab–Professor Sowers & Hernandez** Urbana-Champaign
  Visual Cliffs, Virtual Reality, and Movement Disorders *January 2018 - May 2018*
  - **Virtual Reality:** Developed a virtual world to fit patients with movement disorders using consumer grade VR headsets and gait trainer.
  - **Movement Disorders:** Developed code to receive any data from an electroencephalography so that the VR world may act accordingly.

- **Special Topics in Mathematics–Professor Colman** Chicago, Illinois
  Research in Topological Robotics *January 2017 - May 2017*
  - **Topological Complexity:** The study of configuration and physical spaces.
  - **Automated Machinery:** Created pathing algorithms and generated the number of pathing algorithms dependent on the number of automated machines on some space.

SKILLS

- **Detail-Oriented:** Documenting findings in research; logging work sessions.
- **Communication:** Able to work on a diverse team that may or may not share background similarities.
- **Strong Analysis Skills:** Approach things with care; find ways to attack problems that will benefit workflow later.
- **Languages:** English, Spanish, French, Japanese **Specialization:** Applied Mathematics

TECHNICAL SKILLS

- **Languages:** Python, R, Mathematica, SQL **Technologies:** Stata, Tableau, Microsoft Office