# SKYLER A. KUHN

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#### **Technical Skills**:

Operating Systems Programming Languages Development Environments Other Computing Skills Unix, Linux, Windows, OSX Python, Java, R, SQL, HTML, BASH, Fortran F90 PyCharm, Eclipse, Emacs Command-line interfaces, SAS, Django, Git/Github, High-Performance Computing, Statistical Learning

### Education:

**James Madison University,** *Center for Genome and Metagenome Studies* Bachelor of Science, Biology Harrisonburg, Virginia May 2014

**Virginia Commonwealth University,** *Center for the Study of Biological Complexity* Professional Science Master's, Bioinformatics Richmond, Virginia August 2017

• Graduate GPA: 3.857

## **Developement Experience:**

**Software Developer** for *Dr. Tarynn Witten, Dr. Alberto Cano,* Center for the Study of Biological Complexity Biodemography | Combinatorial Optimization | Data-Mining | WHO Feb. - June 2017

• Devised a novel method for utilizing frequent item-set data mining techniques in exhaustive combinatorics to find conserved patterns in the different global causes of mortality

**Back-End Web Developer** for *Dr. Peter Uetz*, Center for the Study of Biological Complexity *Django* | *mySQL* | *MVC* | *Relational Database Design* | *Normalization* 

- *jango* | *mySQL* | *MVC* | *Relational Database Design* | *Normalization* Jan. May 2017
  Developed a three-tiered web application with a small team that provides a catalogue of all living reptile species and their classification; currently there are more than 10,000 species including another 2,800 subspecies
- Database focuses on taxonomic data (i.e. names and synonyms), distribution information, and literature references

#### Scientific Programmer for Dr. Amanda Dickinson at Virginia Commonwealth University

Dec. 2016 - Jan. 2017

• Developed a custom software tool used to calculate and compare percent identities of different open reading frames of homologous mRNA sequences across various model organisms

#### Bioinformatician for Dr. Maria Rivera at Virginia Commonwealth University

Bioinformatics | Metagenomics | Big-Data Analysis | Microbiome

*Bioinformatics* | *Proteomics* | *Homology Modeling* | *Python* 

- Jan. Aug. 2016
- Conducted a metagenomic analysis on shotgun-sequenced deoxyribonucleic acid to characterize shifts in microbial communities of mice with long-term opioid exposure
- Characterized effects of long-term opioid exposure on gastrointestinal microbial pathogenesis in mice have extended and validated earlier clinical correlative observations

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### Academic Development:

Graduate Teaching Assistant for Applications in Bioinformatics BNFO 420 | Python | Capstone-Class | mySQL | Drug Discovery Jan. - May 2017 Demonstrated ability to communicate highly technical information in a clear and concise manner for the development of novel tools and methods to fight against the Influenza virus Addressed the needs of fifteen students by imparting direct, integrative expertise in the form of computational, quantitative, and biological knowledge Graduate Advisor for VCU's Student Technology Advisory Committee Virginia Commonwealth University Technology Services | Consulting Sep. 2016 - May 2017 Advised and assisted VCU technology services in the design and implementation of matters related to service design, programming, and promotion of technology Graduate Teaching Assistant for Computing Skills & Concepts for Bioinformatics BNFO 201 | Python | Effective Communication Aug. - Dec. 2016 • Evaluated thirty-three students' homework and programming projects related to algorithm design, implementation and bioinformatics analysis Maintained help sessions twice a week and provided constructive feedback for students with questions Graduate Teaching Assistant for a programming class taught to Faculty, Staff, and Students Center for the Study of Biological Complexity | Python | Pipeline Development January 2016 Provided support and guidance in a fast-paced, week-long introduction to programming and pipeline development to aid faculty, staff, and students in their research **Research Assistant** for *Dr. Raymond Enke* at James Madison University *Molecular Biology* | *Epigenetics* | *Genomics* May - Aug. 2014 Investigated the role of epigenetic modifications, specifically deoxyribonucleic acid methylation patterning, in the regulation of retina-specific genes