

# ANDREW BORGMAN

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## EDUCATION

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### **Grand Valley State University, Grand Rapids, MI**

2011 - 2013

M.S. in Biostatistics

Member of Mu Sigma Rho Statistics Honor Society

Overall GPA: 3.97

### **Aquinas College, Grand Rapids, MI**

2007 - 2011

B.S. in Mathematics

Minors in Physics & Accounting

President of Pi Mu Epsilon Mathematics Honor Society

Overall GPA: 3.98 (Summa Cum Laude)

## EXPERIENCE

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### **Van Andel Research Institute**

December 2013 - Present

*Biostatistician II – Bioinformatics & Biostatistics Core*

*Grand Rapids, MI*

- Serve as the Institute's head statistician as part of the Bioinformatics & Biostatistics Core
- Research and developed tools for integrated analysis of multiple high-throughput genomic, transcriptomic and proteomic data sets
- Develop dynamic web applications that allow researchers to investigate high-dimensional datasets
- Create automated reporting systems for analyses using the R programming language
- Conceptualize and teach introductory computing and statistics seminars

### **Van Andel Research Institute**

April 2013 - December 2013

*Biostatistician I – Bioinformatics & Biostatistics Core*

*Grand Rapids, MI*

- Performed statistical consulting for researchers at VARI and MSU College of Human Medicine
- Handled basic statistical inquiries; investigated and implemented advanced methodologies
- Conducted power analyses via exact methods or simulations
- Developed intuitive data visualizations to communicate experimental outcomes
- Applied machine learning algorithms to extract knowledge from high dimensional data sets
- Researched, implemented and compared pipelines for the analysis of NGS data
- Researched and implemented tools for integrated analysis of multiple high-throughput genomic, transcriptomic and proteomic assays
- Deployed and administered GitLab backed git version control system to improve project tracking and project reproducibility

### **Van Andel Research Institute**

December 2011 - April 2013

*Statistical Analyst – Lab of Canine Genetics & Genomics*

*Grand Rapids, MI*

- Lead statistician in high-throughput genomics lab
- Designed pipelines for conducting genome-wide association studies (GWAS)
- Implemented population genetics analyses using high density SNP genotyping data
- Developed workflows for the analysis of whole genome and whole transcriptome next-generation sequencing data

**Grand Valley State University**  
*Graduate Assistant – School of Social Work*

August 2011 - April 2013  
*Grand Rapids, MI*

- Helped to integrate Chalk & Wire curriculum assessment tool for department evaluation
- Performed data aggregation and statistical analysis to show curricula met NASW standards
- Provided general technical support for students and faculty
- Presented paper on data driven curriculum development at the Las Vegas National Social Science and Technology Conference

## RESEARCH SUPPORT

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**Henry Ford Health System**  
*Hermelin Brain Tumor Center*

September 2013 - September 2014

- VARI multi-institute collaboration with Henry Ford Health System, M.D. Anderson Cancer Center and George Mason University
- Major goal of this project is the development of analytical techniques for integrating information gleaned from multiple high-throughput omics assays to identify networks/pathways suggesting novel therapeutic targets, targets of existing drugs, and combinational strategies for glioblastoma treatment.

**Grand Valley State University**  
*Presidential Research Grant*

August 2012 - December 2012

- The goal of this project was to leverage high-performance computing technologies to clean and analyze a large data set from an experimental offshore LiDAR buoy stationed in Lake Michigan.

## PUBLICATIONS

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1. Neff MW, Beck JS, Koeman JM, Boguslawski E, Kefene L, Borgman A, et al. Partial deletion of the sulfate transporter SLC13A1 is associated with an osteochondrodysplasia in the miniature poodle breed. PloS one. 2012;7(12):e51917.

## AWARDS & CERTIFICATES

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- GVSU Intern of The Year (2011-2012)
- Outstanding Mathematics Senior Award (2011)
- Outstanding Physics Student of the Year (2010)
- SOA Exam P
- SOA Exam FM

## TECHNICAL STRENGTHS

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**Programming Languages**  
**Web Development**  
**Databases**  
**Linux / Other**  
**Bioinformatics Tools**

R, Python, C++, C#  
HTML/HTML5, CSS, JS, Django web framework  
MySQL, PostgreSQL, MongoDB (noSQL)  
BASH, Sed, AWK, LaTeX, git, GitLab  
GATK, EdgeR, DEseq, GSEA, PLINK