






ANDREW REID

Software Engineer

CONTACT

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Saint Paul, Minnesota 
[My portfolio](#) 
[LinkedIn](#) 
[Github](#) 

EDUCATION

Master of Science
Computational Physics
University of Minnesota
GPA: 3.57

Bachelor of Science
Physics, Mathematics
Bethel University
GPA: 3.94

*Meritorious Winner | COMAP
Mathematical Contest in Modeling |
Placed in top 13% of 1,162 teams globally*

RELEVANT COURSES

Directed Study: Automated Classification
of Ultrasonic Rodent Vocalizations
Numerical Methods (advanced algorithm)
Mathematical Methods in Physics and
Engineering (Fourier analysis, statistics)
Scientific Computing (C++, OO design)
Introduction to Programming (HTML, JS)

SKILLS

Python
C++
JavaScript
Angular
SQL
PostgreSQL
HTML / CSS
High Performance Computing
Azure DevOps
Problem Solving

WORK EXPERIENCE

Software Engineer

Aligned Applications / Aug 2020 - current / Minneapolis, MN

- Collaborated via Azure DevOps to deliver frontend product in Angular.js
- Used NgRx to develop Help screen, states, and service components that return a JSON payload yielding effective and seamless user experience

Founder and Owner

Andrew Reid Tutoring Solutions / Aug 2016 - current / Roseville, MN

- Created business model, service and marketing that drove revenue up 200%
- Coached clients in physics and math to improve by 1 or 2 letter grades
- Communicated with empathy and clarity to deliver positive experiences

Researcher

University of Minnesota / Aug 2012 - Aug 2016 / Minneapolis, MN

- Designed molecular dynamics simulations utilizing HPC resources at Minnesota Supercomputing Institute to complete calculation 100x faster
- Optimized performance at up to 550 cores, reducing cost to group by 22%
- Leveraged expertise with Python's NumPy, SciPy, matplotlib, and Pandas in Jupyter framework to characterize functional structures and dynamics
- Calculated a model regression that bridged the gap between 2 groups and 1 partner company, yielding 33% faster drug discovery
- Presented findings at national Biophysical Society meetings

Technical Aide

3M / Oct 2007 - Aug 2011 / Maplewood, MN

- Cultivated statistical intuition, measured product data to specifications
- Developed automated ImageJ circularity measure in VBA and Java
- Spearheaded audit leading to 85% reduction in manufacturer defects

PROJECTS

Bookstore Database App

- Leveraged expertise in Python, Tkinter and SQL to build a graphical user interface and database backend with CRUD functionality that delivers streamlined user experience

Mood Booster Mobile App

- Utilized experience in Python, Kivy, and Linux to create and package a multiscreen android app that manages JSON user credentials and delivers responsive text payloads

Geocoder Web App

- Harnessed proficiency in Flask, Pandas, and GeoPy to develop a Python web app that converts uploaded text addresses to coordinates and populates a CSV file for download