

# Nicholas A. Roberson

SOFTWARE DEVELOPER · RESEARCH INTERN

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## Education

**Grinnell College**, Grinnell, IA

August 2014 - May 2018

*B.A. in Computer Science*

GPA: 3.55/4.00, Major GPA: 3.70/4.00

Selected Coursework: Algorithms/Object Oriented Design, Data Visualization, Computer Networks, Computer Architecture, Electronics, Software Development Principles, Team Software Dev. for Community Orgs., Combinatorics, Linear Algebra.

**Aquincum Institute of Technology**, Budapest, Hungary

August 2016 - December 2016

Selected Coursework: Theory of Computing, Graph Theory, Combinatorial Optimization, Mobile Software Development.

## Programming Skills

**Programming:** Java, C, Python, JavaScript, Ruby, Android, Scheme, SQL, HTML.

**Software:** Eclipse, IntelliJ, NetBeans, PyCharm, Emacs, Android Studio, Gluon Scene Builder.

**Other:** Android mobile development, Java GUI development, data visualization, hardware (Arduino/Raspberry Pi).

## Work Experience

**Research Intern - Robust Design Patterns for Molecular Computing Systems**, Grinnell, IA

May 2017 - Present

Grinnell College Computer Science Department

- Worked with students and professors at Grinnell College and Iowa State University to develop and prove the correctness of robust design patterns in molecular programming using chemical reaction networks.
- Developed a Molecular Programming IDE, titled Caldron, using the NetBeans IDE and JavaFX.
- Submitted a paper titled, "Caldron: An IDE for Modular Development of Chemical Reaction Networks" to the BIOSTEC 2018 conference.

**Android Developer**, Grinnell, IA

August 2016 - Present

Grinnell College Application Development Club

- Wrote front and back end code for the campus directory and radio station Android applications.
- Communicated with student designers to produce the UI look and feel for various applications.

**Web Development Intern**, Menlo Park, CA

May 2016 - August 2016

SRI International - S.T.A.R. Lab

- Collaborated with STAR Lab team members to develop a web based application to gather data from native speakers of endangered languages for the purpose of cultural preservation.

## Projects

**Caldron IDE**

2017

A cross-platform, molecular programming IDE built using JavaFX. Caldron allows users to modularly develop and test chemical reaction networks (CRNs) for computation, a feature currently unavailable in any other IDE/program for CRNs.

**Spotify User Visualization**

2017

A website for Spotify users to visualize their accounts on and discover new music, built using D3.js.

**First Responder**

2016

An Android application that aims to cut down on paramedic response time for severe injuries.

## Campus Involvement

**Varsity Swim and Club Water Polo Teams**

August 2014 - Present

- Dual captain of the Grinnell College swim and water polo teams for the 2017/2018 season.
- 8-time medal winner at the Midwest conference championships and 3<sup>rd</sup> and 5<sup>th</sup> place finisher at DIII CWPA nationals.

**Volunteering**

August 2015 - Present

- Coordinated and/or been involved in a variety of volunteer efforts within the Grinnell community.