

# Liam Niehus-Staab

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## Education

### Grinnell College

Grinnell, IA

BACHELOR OF ARTS

Graduate of the Class of 2020

- Computer Science Major
- Major GPA: 3.76 Overall GPA: 3.6
- Deans list Fall 2016 and Spring 2017

## Experience

### Village Cook

Bemidji, MN

CONCORDIA LANGUAGE VILLAGES, EL LAGO DEL BOSQUE

July-August 2016

- Worked under the head chef fixing daily meals for campers and washing dishes.

### Camp Counselor

Bemidji, MN

CONCORDIA LANGUAGE VILLAGES, EL LAGO DEL BOSQUE

July-August 2017

- Worked under Diane Tess as a Spanish immersion camp counselor, teaching children aged 6-18 Spanish conversational skills, and cultural knowledge.

### Software Engineer II (iOS)

Full Remote

HONEY (PAYPAL)

February 2021-Present

- Developed UI for product detail and checkout pages using Swift and Xcode for the Honey iOS app.
- Lead the design and implementation of automated translation system for both mobile teams, saving 6 hours of dev time each release.
- Implemented new toast notification UI, causing a 40% jump in iOS checkout flow engagement.
- Helped port the Honey iOS app from React Native to native Swift.
- Created shared CI/CD distribution pipeline to make sharing SDKs between Honey and PayPal possible.
- Lead multiple team culture/bonding activities, including regular bookclub and happy hour meetings.

### Software Engineering Intern (Android)

Boulder, CO

HONEY (PAYPAL)

June-September 2020

- Developed the team's first automated UI tests for major parts of the Android app.
- Refactored inaccessible views to be accessible for screen readers, keyboard navigation, and large font sizes.
- Built a screen to showcase our custom UI components, enabling greater reuse and easier tweaking of their functionality.

### Software Engineering Intern

Mountain View, CA

HYTRUST INC.

June-August 2019

- Used openAPI to make public Django API self-documenting, greatly reducing documentation update turn-around time.
- Increased products' network security by integrating SSL certificate validation between linked products in the field, utilizing openSSL.
- Used Coverity to locate and fix potential bugs in API code.

### Head of Android Development

Grinnell, IA

GRAMMIEGRAM LLC

August 2018 - June 2019

- Led a small team in an Agile environment with a test-driven approach.
- Developed REST API in Python with Django for use in iOS and Android apps.
- Created a proof-of-concept mobile app in Java that mirrors the messaging behavior of our web app.

## Research Assistant

Grinnell, IA

UNDERGRADUATE RESEARCH PROJECT, IMAGE SYNTHESIS FOR MACHINE LEARNING

June-August 2018

- Developed a C/C++ program to generate synthetic training data for a text recognizing neural network.
- Training with data generator improved model accuracy by 10% over accuracy when trained on industry-standard data sets.
- See the research code at <https://github.com/niehusst/MapTextSynthesizer>
- See publication at <https://ieeexplore.ieee.org/abstract/document/8978121>

## Co-Founder and Full Stack Developer

Grinnell, IA

GRAMMIEGRAM LLC

April-August 2018

- Developed the backend for user preferences using Python and the Django framework.
- Constructed and maintained unit testing for the GrammieGram web app.
- Designed frontend UI for the contact management page using JavaScript and Bootstrap.
- Gained experience working remotely with a team using Git version control.
- See the website at <https://grammiegram.com>

## AppDev Junior Engineer

Grinnell, IA

APPDEV GRINNELL

January 2018 - Spring 2020

- Developed and wrote tests in Java for the Grinnell Directory Android application
- Gained experience writing tests using JUnit, Mockito and Espresso

## Skills

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**Programming** Java, Kotlin, C/C++, Python, JavaScript

**Web** Django, Ruby on Rails, HTML5, CSS

**Mobile** Android

**Spoken Languages** English, Spanish

## Interests Activities

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### Team Captain

Grinnell, IA

GRINNELLEPHANTS ULTIMATE FRISBEE

August 2018 - May 2019

- Gained experience as a teacher and leader.
- I work with others to regularly plan and execute practices 3 times a week.

### Android App Development

- Making useful apps that help me with daily problems or tasks

### Robot Programmer

Kalamazoo, MI

FIRST ROBOTICS COMPETITION, TEAM 6002

Oct. 2015 - May 2016

- Wrote Java code for the robot's basic abilities and autonomous mode.

### Volunteer

Grinnell, IA

POWESHIEK ANIMAL LEAGUE SHELTER

Sep. 2016 - May 2019

- Cleaned, cared for, and socialized cats and their environment.

## Projects

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## Compliance Accomplice

Oct 2018

HACKUIOWA

- Developed email middleware using Python to detect and prevent SEC compliance violations using Natural Language Processing.
- Won “Best Commercial Potential” award from John Pappajohn Entrepreneurial Center and “Best use of Google Cloud” award from Major League Hacking.
- See project at <https://github.com/niehusst/ComplianceAccomplice>

## MyRSA

June 2019

- Implemented RSA encryption from scratch in C, using openssl calculations.
- Developed a TCP server using POSIX sockets for exchanging encrypted messages.

## Robot Programmer

Kalamazoo, MI

FIRST ROBOTICS COMPETITION, TEAM 6002

Oct. 2015 - May 2016

- Wrote Java code for the robot's basic abilities and autonomous mode.
- Optimized PID controls to achieve smooth control of robot drive system.

## Relevant Course Work

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coursera mobile robots computer vision