

# Khoa Nguyen

nguyen-khoa.github.io | knguyen18@wooster.edu | San Diego, California

## EDUCATION

### THE COLLEGE OF WOOSTER

B.A., COMPUTER SCIENCE (CS) & MATHEMATICS

Expected Dec 2017 | Wooster, OH

Cumulative GPA: 3.97 / 4.0

CS Major GPA: 3.96 / 4.0

Mathematics Major GPA: 3.96 / 4.0

## SKILLS

### PROGRAMMING

Over 3000 lines:

C++

Over 1000 lines:

C • R • Java • Python

Familiar:

SQL • Scheme • Bash

• MATLAB

### OTHERS

git •  $\text{\LaTeX}$  • OpenCV

• Android • Linux • Jekyll

## COURSEWORK

### RELATED COURSES

Machine Intelligence + Project

Algorithm Analysis + Project

Operating Systems

Computer Networking

Software Engineering + Project

Programming Languages

Data Structures & Algorithms + Lab

Probability & Statistics I, II + Project

Advanced Linear Algebra

Real Analysis I

Functions of Complex Variables

Differential Equations

(Research/Teaching Asst & Grader)

Algorithm Analysis


User Interface Design

Linear Algebra

Data Structures & Algorithms

## LINKS

 [github.com/nguyen-khoa](https://github.com/nguyen-khoa)

 [linkedin.com/in/khoanguyen18](https://www.linkedin.com/in/khoanguyen18)

## EXPERIENCE

### INTUIT, INC. | SECURITY ENGINEER INTERN

Expected to start June 2017 - Aug 2017 | San Diego, CA

### WESTERN RESERVE GROUP | AMRE RESEARCH CONSULTANT

May 2016 - July 2016 | Wooster, OH

- Automated the data mining process of auto insurance data from Microsoft Access to Excel with SQL and VBA, under a simple, intuitive user interface.
- Led a team of 3 to the project's completion 2 weeks before the deadline.
- Replaced the long manual process of extracting data for varying time periods.

### GOODYEAR TIRE & RUBBER | AMRE RESEARCH CONSULTANT

May 2015 - July 2015 | Wooster, OH

- Wrote 1/3 of the source code of Automated X-ray Image Analysis Software (AXIAS), used daily by Goodyear in tire inspection.
- Designed algorithms for image filtering and analysis with C++ and OpenCV.
- Implemented statistical tests to increase accuracy and consistency.
- Reduced the time for inspecting tire images from 30 min down to 5-6 min.

## PROJECTS

### PREDICT STOCK PRICES WITH TIME SERIES ANALYSIS & MACHINE LEARNING IN R

MATH-329 Probability & Statistics II | CSCI-310 Machine Intelligence

- Created an ARIMA time series model combined with a Restricted Boltzmann Machine (RBM) in R to predict the prices of stocks.
- Ongoing work includes adding more attributes to the data for finer predictions

### BLOCK CIPHERS

CSCI-200 Algorithm Analysis

- Investigated the theories behind block ciphers, essential in data encryption.
- Wrote a C++ proof-of-concept substitution-permutation network, a structure used in most modern block ciphers such as AES.

### $\text{\LaTeX}$ ON ANDROID: TEXMOB

CSCI-230 Software Engineering - Mobile Computing

- Created a fully functional prototype of an Android app to write and compile  $\text{\LaTeX}$
- Designed all of the user interface and some of the back-end data storage.

## EXTRACURRICULARS

GHC Scholar & Poster Presenter

Participant - Honorable Mention  
Participant

Co-Founder & Vice President

Resident Director

Trustee

Grace Hopper Celebration of Women  
in Computing 2016

Mathematical Contest in Modeling 2015, 2016

HackMIT 2016, OHI/O 2015 hackathons

Wooster Computer Science Club

Office of Residence Life

Jenny Investment Club