# Khoa Nguyen

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## EDUCATION

### THE COLLEGE OF WOOSTER

B.A., Computer Science (CS) & Mathematics
Aug 2014 - Dec 2017 | Wooster, OH
Cumulative GPA: 3.97 / 4.0

## SKILLS

### PROGRAMMING

Over 3000 lines:
C++
Over 1000 lines:
C • R • Java • Python
Familiar:
SQL • Scheme • Bash
• MATLAB • Go •Ruby

### OTHERS

git • 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
linkedin.com/in/khoanguyen18

## HONOR SOCIETIES

$\Phi BK$ Phi Beta Kappa
$\Pi ME$ Pi Mu Epsilon

## EXPERIENCE

### INTUIT, INC. | Security Engineer Intern

May 2017 - Aug 2017 | San Diego, CA

- Building and maintaining a platform in Go and Ruby designed to automate security testing
- Learning Metasploit scripting to incorporate into the platform

### 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.

### LaTeX ON ANDROID: TEXMOB

CSCI-230 Software Engineering - Mobile Computing

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

## EXTRACURRICULARS

GHC Scholar & Poster Presenter
Grace Hopper Celebration of Women in Computing 2016
Participant - Honorable Mention
Mathematical Contest in Modeling 2015, 2016
Participant
HackMIT 2016, OHI/O 2015 hackathons
Co-Founder & Vice President
Wooster Computer Science Club
Resident Director
Office of Residence Life
Trustee
Jenny Investment Club