Khoa Nguyen

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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

THE ORME SCHOOL
Grad. May 2014 | Mayer, AZ
Cum. GPA: 4.3 / 4.0

SKILLS

PROGRAMMING
Over 3000 lines:
C++
Over 1000 lines:
C • Java • Python
Familiar:
R • SQL • Scheme • Bash

OTHERS
git • LaTeX• OpenCV • Android • Linux • Jekyll

COURSEWORK

RELATED COURSES
Machine Learning
Algorithm Analysis + Project
Operating Systems
Computer Networking
Software Engineering + Project
Programming Languages
Data Structures & Algorithms + Lab
Probability & Statistics I, II + Project
Advanced Linear Algebra

RESEARCH/TEACHING ASST & GRADER
Algorithm Analysis
User Interface Design
Linear Algebra
Data Structures & Algorithms

LINKS

github.com/nguyen-khoa
linkedin.com/in/khoanguyen18

EXPERIENCE

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, in a team of 4.
- Designed original algorithms for filtering and analysis with C++ and OpenCV.
- Implemented statistical hypothesis testing into the software to increase the accuracy and consistency in detecting the tires' anomalies.
- Reduced the time for inspecting images from 30 min down to 5-6 min.

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.
- Allowed users to obtain and analyze loss data dynamically and automatically by quarters based on user input.
- Significantly reduced the time and efforts to extract data for varying time periods.

PROJECTS

BLOCK CIPHERS
CSCI-20000 Algorithm Analysis
Investigated the theories behind block ciphers, a branch of cryptographic algorithms that is essential in data encryption, as my Junior Independent Study project. Wrote a proof-of-concept substitution-permutation network in C++, a structure used in most modern block ciphers, including the Advanced Encryption Standard (AES).

PREDICT STOCK PRICES WITH TIME SERIES IN R
MATH-32900 Probability & Statistics II
Worked with a partner to create an ARIMA time series model in R to predict the prices of 7 most volatile stocks in the portfolio of Wooster's investment club. Correctly forecast the selling of a stock based on its previous price over a year.

LaTeX ON ANDROID: TEXMOB
CSCI-23000 Software Engineering - Mobile Computing
Worked with a partner to create a fully functional prototype of TexMob, an Android app that allows users to write and compile LaTeX code on their Android devices. Designed all of the user interface and some of the back-end data storage.

ACTIVITIES

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