

MATTHEW N. GOTTSACKER

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EDUCATION

B.S. in Computer Science, English (Minor)

GPA: 3.93 (with Honors)

Saint Louis University, St. Louis, MO

Webster University, Vienna, Austria

CS Courses: Computer Security, Network Programming, Operating Systems, Algorithms, Computer Architecture, Artificial Intelligence, Computer Ethics, Taming Big Data, Programming Languages, Data Structures, Object Oriented Software Design

WORK EXPERIENCE

Alumni Service Corps Teacher

August 2019 – June 2020

Marquette University High School, Milwaukee, WI

Taught Computer Programming course using the Java programming language; designed curriculum to be interdisciplinary, creative, innovative, collaborative, and ethical. Mentored students on the FIRST Robotics Competition programming subteam. Served as a Kairos retreat leader. Co-directed the 2019 production of Senior Follies, a play written by students.

Data Analysis Research Intern

June 2019 – August 2019

Nintex, Bellevue, WA

Developed a fully automated data analysis pipeline to gain insights about user behavior. The pipeline detects fresh data and transforms meaningful information into reports that summarizes customer usage and highlights interesting or outlier activity.

Research Intern

May 2018 – July 2018

MIT Lincoln Laboratory, Lexington, MA

Worked with a Software-Defined Networking (SDN) application that allows network analysts to write access control policies based on high-level identifiers like usernames that are enforced at the network level. Created a web-based application for the system to visualize the bindings between pairs of network identifiers. Presented work at ACM Internet Measure Conference in October 2018.

Research Assistant

September 2017 – May 2019

SLU, St. Louis, MO

Research project involves designing a novel drone platform in which humans can control a drone or network of drones through intuitive conversation. Topics of interest include natural language processing and distributed autonomous systems.

Web Developer and Technology Consultant

August 2018 – May 2019

Saint Louis University English Department, St. Louis, MO

Worked with the Computer Assisted Instruction Lab to design a website (slucompasslab.com) to better connect students and instructors with the Lab's technology resources. Built a web-based virtual reality tour to acquaint users with the technology.

Application Development Internship

May 2017 – August 2017

State Farm, Bloomington, IL

Created an Enterprise Service Bus (ESB) using MuleSoft to connect a UI to its RESTful API. Created a Java API using Spring Framework.

Technical Writer and Pre-Sales Support

May 2016 – August 2016

airSpring Software, Lexington, KY

Edited and generated high-level product documentation around instruction and usage examples of the software. Created product demos for software sales.

PUBLICATIONS AND PRESENTATIONS

Gottsacker, M., Gomez, S.R., Skowyra, R., and Esposito, F. "Toward Effective Visualization of Network Identifier Bindings in a Software-Defined Network." Poster in ACM Internet Measurement Conference. Boston, MA. 2018.

PROJECTS (AVAILABLE ON GITHUB OR BY REQUESTED DEMO)

DigitalNative.space (web)

Exploration of how humans interact with computers through different experiments. Created a virtual reality experience to study ways that people attend to an entirely digital world.

SLU+ (Android)

Augmented reality map of Saint Louis University's campus. SLU+ adds markers on top of buildings and statues around campus and displays interactive, historic information to the user.

WikiLearn Spanish (Alexa Skill)

Alexa application to improve Spanish learners' listening comprehension by reading Wikipedia articles in alternating English and Spanish.

St. Louis Parcel Data Aggregation (Bash)

Collaboration project with a sociology researcher. This set of scripts scrapes the St. Louis Government's Open Data project and filters relevant parcel data into a tab-separated file. This data helped produce maps of the city of St. Louis based on total parcel value and how each parcel is used.

Sentiment Analysis (Python)

Python program to use 30,000 tweets marked as positive and negative in the Basque language as training data to classify 3,000 unknown tweets. Most accurate results in class with 73% correct classification.

PROGRAMMING SKILLS

Languages: Python, Bash, Java, C, C++, JavaScript, X86 and Y86 assembly code, HTML, CSS

Tools: D3.js, A-Frame, Git, Node.js, Express, Databricks, Azure, AWS, Alexa Skills Kit

AWARDS AND HONORS

James D. Collins Award for Academic Excellence, Saint Louis University

Recognized by the Computer Science Department for outstanding scholastic and creative achievement. Awarded to one senior in the department each year.

Knoedler Student Research Grant, Saint Louis University

Won grant for \$500 to support travel and conference expenses to present a research poster at the ACM Internet Measurement Conference.

Intern Idea Innovation Challenge Winner, MIT Lincoln Laboratory

Developed an idea with four other interns for a system that uses natural language processing techniques to analyze speech patterns in the workplace in order to detect and inform employees of implicit biases. We presented our idea to five executives of MIT LL in a Shark Tank-style pitch.

Deloitte Consulting Challenge Winner, Deloitte

Designed and presented a redevelopment plan for Midtown in St. Louis.

PwC Consulting Challenge Winner, PricewaterhouseCoopers

Designed and presented a case study solution around automation in convenience stores.

GENI Regional Workshop Travel Grant, University of Oregon

Won full grant to learn about the Global Environment for Network Innovations as a research tool.

Computer Science Award, SLU Department of Mathematics and Computer Science

Selected by professors for performance and engagement in CS courses.

Mathematics Award, SLU Department of Mathematics and Computer Science

Selected by professors for performance and engagement in Mathematics courses.

Presidential Scholarship Finalist, Saint Louis University

Scholarship totaling \$80,000 over 4 years.

SERVICE AND LEADERSHIP

Coding Mentor, Cardinal Ritter College Prep High School

Teach high school students how to code in an after-school program.

Volunteer, St. Benedict Joseph Labre Ministry with the Homeless

Prepare food and share it with people experiencing homelessness in the City of St. Louis. Use the food as a conduit to conversation and friendship with those less fortunate than us.