MATT GOTTSACKER

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EDUCATION

Ph.D in Computer Science (Doctorate anticipated 2025)   **GPA: 4.0**

University of Central Florida, Orlando, FL

    Selected Coursework: Virtual Reality Engineering, Augmented Reality Engineering, Design & Analysis of Algorithms, Computer Architecture

B.S. in Computer Science, English (Minor), May 2019   **GPA: 3.93 (with Honors)**

Saint Louis University, St. Louis, MO

Webster University, Vienna, Austria

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

WORK EXPERIENCE

Graduate Research Assistant   *August 2020 – Present*

SREAL Lab, University of Central Florida, Orlando, FL

    Research Augmented, Mixed, and Virtual Reality technologies and how humans interact with them. Design, program, and run user studies. Particular interest include blending physical and virtual realities, impossible spaces, and methods for smoothly transitioning people and objects between virtual and physical worlds.

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 for company executives that summarizes customer usage and highlights interesting or outlier activity.

Research Intern   *May 2018 – July 2018*

MIT Lincoln Laboratory, Lexington, MA

    Worked on a Software-Defined Networking 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 involved designing a novel drone platform in which humans can control a drone or network of drones through intuitive conversation.

Web Developer and Technology Consultant   *August 2018 – May 2019*

Saint Loius 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 using MuleSoft to connect a UI to its RESTful API.

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.

ACCEPTED PAPERS

Z. Choudhary, **M. Gottsacker**, K. Kim, R. Schubert, J. Stefanucci, G. Bruder, G. Welch. "Revisiting Disance Perception with Scaled Embodied Cues in Social Virtual Reality." *2021 IEEE Conference on Virtual Reality and 3D User Interfaces (VR).*

PROJECTS (DEMOS AND CODE LINKED ON PERSONAL WEBSITE)

DigitalNative.space (web)
        Observations, analysis, and experiments exploring how humans interact with computers. Includes a virtual reality experience designed to study how people attend to an entirely digital world.

SLU+ (Android app)
        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 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, C#, C++, JavaScript, Bash, Java, HTML, CSS
        Tools: Unity, D3.js, A-Frame, Git, Node.js, Express.js, Databricks, Azure, AWS, Alexa Skills Kit, Linux

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*
        Grant to present a research poster at the ACM Internet Measurement Conference.

Intern Idea Innovation Challenge Winner, *MIT Lincoln Laboratory*
        With four other inters, developed an idea 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.

Presidential Scholarship Finalist, *Saint Louis University*
        Scholarship totaling $80,000 over 4 years.