

# Alexander Giovannelli

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## EDUCATION

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### Virginia Tech

Ph.D. in Computer Science, GPA: 4.00/4.00

- Advisor: Doug A. Bowman

Blacksburg, VA, USA

Aug. 2021–Current

### University of Cincinnati

B.S. in Computer Engineering, GPA: 3.30/4.00

- Minors: German Studies, Computer Science

Cincinnati, OH, USA

Aug. 2013–May 2018

## EXPERIENCE

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### Virginia Tech

Graduate Research Assistant

- Published research study results regarding intermittent typing in immersive virtual reality using C#, Unity, Python, JMP, & SPSS technologies
- Conducted research regarding avatar visualizations in augmented and virtual reality collaboration
- Generated prototype applications and experimental studies using C# and Unity technologies

Blacksburg, VA, USA

May. 2022–Aug. 2022

### JPMorgan Chase & Co.

Associate Software Engineer I

- Developed front-end features for Chase.com using JavaScript, HTML, and CSS technologies
- Designed and implemented minimum viable product user interfaces via Figma design tool
- Authored technical documentation for product owners and developers
- Appointed subject matter expert in behavioral-driven development and CI/CD initiatives
- Automated logging of proprietary systems using the Python programming language

Columbus, OH, USA

Jul. 2018–Jul. 2021

### Siemens Healthineers

Software Engineer Intern

- Developed back-end software for use in advanced therapy devices using the C# programming language
- Created system architecture diagrams to record project design changes and behaviors with Sparx Enterprise Architect
- Represented project team in international software system integration meetings using German and English languages

Forchheim, BY, DE

Jan. 2017–Aug. 2017

### Granville Exempted Village Schools

Systems Administrator Intern

- Provisioned Windows and Linux server and workstation systems to support school network infrastructure
- Administered changes to proprietary devices regarding operating system applications, packages and images
- Managed summer technician team operations

Granville, OH, USA

May 2016–Jul. 2016

### Matrix Technologies, Inc.

Computer Programmer and Systems Analyst Intern

- Created full-stack internal software tools for engineers and project managers using C#, XML and SQL technologies
- Updated existing project management software according to submitted user feedback

Maumee, OH, USA

Aug. 2015–Dec. 2015

- Authored software usage documents to elaborate on internal tool usage

## Matrix Technologies, Inc.

Computer Programmer and Systems Analyst Intern

Maumee, OH, USA

Aug. 2014–Dec. 2014

- Enhanced existing proprietary software using the C# programming language
- Researched emerging technologies and presented potential process improvements for development team
- Coordinated project design changes with stakeholders

## PUBLICATIONS

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- [1] **A. Giovannelli**, L. Lisle, and D. A. Bowman, “Exploring the impact of visual information on intermittent typing in virtual reality”, in *2022 IEEE International Symposium on Mixed and Augmented Reality (ISMAR)*, 2022.
- [2] L. Lisle, F. Lu, S. Davari, I. A. Tahmid, **A. Giovannelli**, C. Llo, L. Pavanatto, L. Zhang, L. Schlueter, and D. A. Bowman, “Clean the ocean: An immersive vr experience proposing new modifications to go-go and wim techniques”, in *2022 IEEE Conference on Virtual Reality and 3D User Interfaces Abstracts and Workshops (VRW)*, 2022, pp. 920–921.

## PROJECTS

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- A Digital Twin Based Approach to Smart Lighting Design Jan. 2022–Apr. 2022  
*Developed methods and techniques to support smart, real-time lighting design in an immersive virtual reality experience using Unity and C# technologies*
- Clean the Ocean: An Immersive VR Experience Oct. 2021–Mar. 2022  
*Created an immersive virtual reality experience to increase players’ awareness of trash pollution in the ocean while improving the Go-Go and World in Miniature interaction techniques using Unity and C# technologies*
- An Evaluation of Web Application Energy Consumption using WebAssembly Sep. 2021–Dec. 2021  
*Created a WebAssembly workbench using JavaScript, Rust, and Go programming languages for evaluation of their execution times and energy efficiency on mobile devices*
- An Empirical Study of Neural Question-Answering Models Sep. 2021–Dec. 2021  
*Generated Jupyter Notebooks with Python to test and compare deep neural models against question-answering tasks*

## SCHOLARSHIPS AND AWARDS

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- IEEE Conference on Virtual Reality and 3D User Interfaces Contest Winner 2022
- International Co-op Program Scholarship 2016–2017
- Matrix Technologies, Inc. Co-op Scholarship 2014–2016
- Cincinnatus Scholarship 2013–2014

## TEACHING

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- **Graduate Teaching Assistant** at Virginia Tech Fall 2022  
*Comparative Languages (CS-3304)*
- **Graduate Teaching Assistant** at Virginia Tech Fall 2021 & Spring 2022  
*Software Design & Data Structures (CS-2114)*

## ORGANIZATIONS

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- Member at Computer Science Graduate Student Council 2021–Current  
*Represented the interests of the CS graduate student body both within the department and outside, helped organize social events among graduate students, and helped incoming students become familiar with departmental procedures and activities*

## SKILLS

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- **Programming Languages:** C#, JavaScript, Java, Python, HTML, CSS
- **Development Tools:** Unity, Git, Jira, Figma, Blender
- **Research Tools:** JMP, SPSS, LaTeX