ZACHARY E. VANSCOIT

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SUMMARY

Computer Science practitioner with a focus in Software Development, Data Visualizations, and User Experience Design. With a strong passion for organization of group projects and facilitating the organization and communication in event planning. Using the abilities to adapt quickly and effectively under pressure as the need to always keep busy is expressed with every activity.

EDUCATION

Southern Illinois University Carbondale
Master's in Computer Science, May 2020, GPA: 3.78
Bachelor's in Business Management and Computer Science, December 2018

SKILLS

Java, mySQL, C#, HTML5, CSS, JavaScript, Linux, C, AGILE, Team management, Event Planning, Logistics Management, Time Management, Graphic Design, Video Production, and Action Choreography

PROFESSIONAL EXPERIENCE

Southern Illinois University, Carbondale, IL | January 2019 - Present
Lecturer, Information Systems Technology | January 2020 – Present

- Teach a 300 level Database Programming with SQL to IST students at the undergraduate level.
- Create curriculum to effectively cover all areas of the topic and implement.
- Create various forms of assessments for the 20+ undergraduate students.

Graduate Research Assistant, College of Liberal Arts | January 2019 – December 2019

- Handle promotional materials such as graphic design, video production, and social media platforms.
- Advisement in new technologies, and IT implementation of the College.
- Involvement in several event planning projects on campus with the governing faculty body.
- Organized several events on campus acting as the lead event coordinator.

Emagination Tech Camps, Atlanta, GA, Boston, MA, Fairfield, CT | Summers 2018 / 2019
Network Administrator

- Taught Data Structures in Java, AI, Machine Learning with Java, Virtual Reality and Game Development in Unity, Object Oriented Programming in C++, Web Design (HTML, CSS, JavaScript), Audio Engineering, Video Production to 100+ adolescents
- Performed the setup and take down of over 17 computer labs.
- Maintained computer labs with over 180 computers while keeping them above 95% uptime.
- Managed inventory and directed shipments of inventory throughout the sites.
- Organized staff work schedules, classroom schedules, curriculum assignments, Production Assistant schedules, and hundreds of kids' schedules as they changed every two weeks.

Metals Technology Inc., Carol Stream, IL | May 2013 - August 2015
General IT Specialist

- Operated and maintained various Unix based furnace controllers along with machine maintenance.
- Managed data flow and archiving of orders by implementing a new organizational system.
- Consistently corrected errors with orders saving the company thousands of dollars in reworks.

CLUBS & ORGANIZATIONS

SIU Esports, President | January 2018 - Present

- Collaborated with University faculty to design and organize eSports on campus as a brand.
- Managed several game heads, department heads, executive officers, and general members regularly.
- Organized and acted as the event coordinator for the first, and now annual, solo-focus game tournament Super Smash Revolution which had over 90 attendees playing in four simultaneous tournaments over the period of 10 hours which generated over $700 of revenue.

SIU Aikido Club, President | September 2017 – December 2019

- Managed several members on a weekly basis while leading instruction of techniques practiced.
- Organized trip planning to several seminars out of state with club affiliates, faculty, and parents.
- Organized a seminar to bring in high level instructors within the ASU organization for instruction.

PROJECTS

Directional Mobile Rhythm Game – Game Project, December 2019

Used Unity to create a mobile rhythm game that displays playing information in the form of a chart and reads from a unique text based file type created solely for this game. Also created a separate application that acts as an editor for each of these unique file types with a tag interpreter, and automatic ratio calculation to choose which image files in a given folder would be best for displaying on specific screens. This entire project is still being worked on to this day and is planned to be sold at cost over the various mobile market places.

***Economic Frequency Predictor,* June 2019**

Created a program that monitors simulated economic data, such as crypto currency buying trends or stock buying trends in the market, and determines an efficient point to buy and sell in the market based on those buying trends. In simulation has generated over 100% of its original investment within six months of time using an update period every second.

***Fluid Vehicle Platooning Simulation,* March 2019**

Proved that vehicle platoons are efficient by creating a physics simulation that calculates thousands of particle collisions against objects that represent vehicles platooning on an open road. This simulation software allows the user to easily toggle different data views to truly understand how efficient autonomous vehicle platooning can be on fuel consumption alone.

Project PLATO, January 2019

Created a stand-alone web browser in Java with embedded SQL injection tools to rigorously test form inputs. Also created a Google Chrome extension that allows for the same functionality as the stand-alone web browser, with additional features of web-scrapping multiple sites at a time.

Motif-Network Searching Optimizer, October 2018

Took the idea of Apache's Hadoop and created software with the ability to calculate the costs and distances to all combinations of DNA sequences of a given length to a set given from a network using optimization techniques such as parallel threading to find the minimum distance.

Vector Player 3D, October 2017

Used digital signal processing to convert mp3 files, wav files, and device audio output into a data stream. Took that data stream and used fast fourier transform to organize frequencies into a list. Based on ranges that modularly scale with on the volume input from the audio, it visually displays terrain generation, cube translations, a frequency spectrum, and hue values based on that audio data.

Multi-dimensional Procedural Terrain Generation, January 2017

Created three individual programs to teach an entire class of colleagues how to program in a multitude of dimensions and used the Perlin-Noise procedural algorithm in a meaningful way that was both visual and educational.