About me

Hello and welcome to my personal site and online Portfolio! A little bit about me, I am a college senior finishing up my last semester at Salisbury University, I am receiving my Bachelor’s degree in Communications Media Production with a minor in Computer Science. I have quite the passion for everything Computer Science, networking, IT, programming, and everything in between! The last few years I have been teaching myself all that I can in my free time and in University Classes. It all started the summer after my freshman year, when I got an itch for game development after being inspired by Nintendo’s Earthbound game series. After this, I knew I wanted to learn more about tech, and this is what started my journey into this wonderful and ever evolving field and I haven’t stopped pursuing tech since. Immediately following my graduation in May 2022, I will be starting my Master’s program in Cybersecurity and Information Assurance at Western Governor’s University.

Skills

Over the last few years of self-teaching, troubleshooting, YouTube tutorials, Computer science classes, personal projects, multiple internships, hands on experience and a lot of hard work, I have picked up quite a few skills, here are a few of them:

Experience

I’ve come a long way over the past few years, and I have accomplished quite a lot. This is how I did it, through a combination of personal projects, YouTube / online tutorials, university classes, internships and quite a bit of elbow grease. Here is my story from when I started to where I am now.

Game-Dev / intro to tech

After being inspired by Toby Fox, a solo developer who made the now hit game Undertale almost entirely by himself, using YoYo Studios Gamemaker Studio, a game development suite which comes with its own UI, built in scripting language with OO functions, pixel art editor and much more. I spent that entire summer working nonstop on my MacBook air and learning the fundamentals of programming as well as game design, and pixel art by working with Game Maker Studio 2. I continued working on game development in my free time throughout the next school year and even learned a bit of audio production to produce my own music for the games. (I have been playing piano for a long time) These projects are available to view on my GitHub if you are interested in seeing some of the game mockups I made. These first few game-dev projects will always hold a special place in my heart for introducing me into the tech field and I will always cherish game development for putting me on this exciting career path.

Building a Desktop

As my projects grew larger in scale, my MacBook Air wasn’t cutting it for me, with high compile times, due to its lack of a GPU to process the graphics of the games, relatively small 8 gigs of memory, and a laptop i5 processor, building my projects was taking much longer than I would like. I decided it was time to build a desktop from scratch to better handle my programming needs. I built a PC with a 9th gen i5 processor, 4GB GTX 1650 GPU, and 32 gigabytes of RAM. This was a neat experience because this was the first time, I had ever built a PC or really worked with computer hardware hands on. Since then, I haven’t been scared to open computers, swap parts, repair computers, laptops, game consoles etc. I’ve fixed computers, upgraded computers and even broken a couple machines by accident in the process, it’s all part of the learning experience.

Moving into traditional Programming

I continued making games until the end of my sophomore year when I decided I wanted to explore other fields of Computer Science. I decided to take an introductory java class at my university to see if I would enjoy more traditional programming that was not game dev related (I did. I got an A+ in the class!) After the class was over, I continued to teach myself a little python as well as get my feet wet with a little bit of Linux by installing mint on an old laptop I had and messing around with it.

Pendant Automation, my first tech job!

With my knowledge I had gained making games over the past year and through online videos and tutorials I watched, I was hopeful to find a summer job doing something tech related. Luckily, I was able to join a small startup that manufactures conveyer belt control systems in Havre de Grace Maryland, that gave me a chance to prove myself in the field. I started out as a PLC (Programmable Logic Controller) technician and programmer, in which I worked with Rockwell Automation programming and testing software. When I first joined the team my boss and company founder, was the only software developer at the time. He decided to shift my duties to also include python and MYSQL scripting to support the ever-increasing amount of clients we had with WCS (Warehouse Control System) related projects. I learned a lot and coded multiple projects for clients that included python, MySQL database, as well as some Linux projects involving configuration of raspberry Pis for automation. Other responsibilities included remote management of windows servers, continued microcontroller testing as well as some PowerShell configuration. I continued this internship through the whole summer and even returned and continued interning with them in the winter. Over the course of my internship, we did projects for Amazon, Pampered Chef, Eby Brown, and Bd Sparks. I made many great connections at pendant and was sad to part ways with the team. This startup had grown dramatically from when I had joined until when I left, and I hope that the company continues to grow and be successful for many years to come! Additionally, I was later able to receive credit for this as an internship at my university. Here is a link to their company site, if you have any industrial control system needs, these are the guys to do it.

Studying Computer Science at my university

After my summer job, my interest in the field grew had grown even more, I decided I wanted to tack on a computer science minor to my studies to learn more about the field of Software Development. At my university, the Computer Science track is very software development based, which taught me a lot of essential skills that are standard in the industry. I took classes learning Java, C++, computer hardware, algorithms and data structures, as well as calculus and discrete mathematics. I finished my minor in CS my junior year and all of my code, projects, and homeworks that I have completed are available to view on my GitHub.

Internship with Johns Hopkins

Summer after junior year was here and I was looking for another job opportunity in technology. I was able to land a great opportunity at John Hopkins Carey business school in Harbor East, Baltimore city. I took on the role of a technical support analyst, in which I was responsible for assisting our students and staff / faculty, as well as help with system administration of their fleet of computers. My duties included management of Active Directory, Microsoft Endpoint Configuration Management console, setting up classrooms and conference rooms with hybrid and remote on-site technology with zoom rooms, mxl microphones, and video conference cameras, imaging new laptops, performing upgrades and repairs on their computers, and taking support calls via zoom to assist remote faculty and staff as well as assisting those present on campus. By the end of the Summer, I had learned quite a bit about system administration, troubleshooting, OS issues, as well as working in a bigger more corporate style workplace. I made a bunch of great connections at Hopkins and still keep in touch with multiple members of my team from time to time, I am very grateful to have had an experience to work with such a prestigious university such as Johns Hopkins as well as the chance to work with such a talented team of techs.

A Linux server from Scratch

Over winter break I decided I wanted to spend some time working on some personal project ideas I had. I wanted to make a Linux server and use it for a multitude of personal reasons. I decided to buy a used OptiPlex desktop computer (i5 16 gigs of ram) since I figured it would be a perfect server and it only cost a couple hundred bucks. I installed Ubuntu server with Ubuntu desktop overtop of it so I could access GUI applications if I needed too although at this point, I am so comfortable in command line I usually just connect via SSH anyway. I did everything from scratch, I installed the OS, setup the port forwarding and firewall rules on both my router and the UFW firewall on Linux as well as configuring all the programs I needed. For the DNS I used noip2.com a free service which allowed me to get my host name (jerserver5712.ddns.net), I installed the update client to ensure that the DNS will update IP changes and even setup a script I found online which runs on a cron job to automatically renew the hostname for me every 30 days. I installed openssh server for both sshing into the server and for sftp file transfers, I got a 4tb and 2tb drive for the server to use for remote backups. For the remote backups I use a windows tool called sshfs which you can use to mount remote sftp servers as network drives, I use this in tandem with a tool called Cobian reflector which allows you to backup files to either a remote drive or a remote sftp server (as well as a bunch of other options). I use this across my laptop and desktop to back up my files so if anything, ever happens or I need to access something that’s on my pc I can just access the sftp server. I can even access it from my phone using an application called Andftp which allows me to access the files on the server and also backup my phone’s files as well. I learned a lot about bash, systemd services, cron jobs and had to even do a little bash scripting to get everything configured the way I wanted. I also wanted this server to host my website, I installed apache2 web server and got everything setup properly to host my personal website. I also run a Minecraft server to play with friends on the server which I have configured as a system service to run automatically on startup. I additionally configured a mail server which connects to a separate Gmail account I made just for the server, it emails me log files for when automatic updates are performed, whether or not the server needs to be rebooted to finish the updates or if there are errors or not, and it emails me a detailed log file from Cobian reflector for when a backup has completed successfully (or if the backup has errors). I learned a ton about networking, port forwarding, system/ server administration, a lot of bash and Linux command line and just a lot more about Linux overall.

Making my own website and learning Version control.

After the server was set up, I figured it was time to make my personal website. I had got my feet wet with web development over the Summer and would look at it here and there after work when I had the time. I finished a few tutorials, and I had a firm understanding of Html5, CSS and how they worked together in tandem. I even made a few small test pages to see how it all worked but nothing serious. However, now I decided to put it all together and make a Portfolio website, I used HTML5, CSS3, Bootstrap5 and a tiny bit of JavaScript to develop this site. I went out of my way and use media queries to optimize the site to be responsive on PCs as well as on mobile screens. Additionally, I had been familiar with GitHub and have always uploaded my projects to my page when I was finished, but I had never integrated it into my workflow. Since this is the industry standard, I decided it was time to learn it, while making this website project, I decided to integrate git version control into my workflow. This made it easier for me to work back and forth between my desktop at my apartment, and my laptop when I was on campus. This project left me with some great skills in web development, and also a powerful upgrade to my workflow with git version control. I am currently in my final semester at Salisbury university, and I am taking 2 classes (COMM 343 communicating on the web, and COMM 490 communicating with code) which both focus on web development with HTML5, CSS, and JavaScript. Hopefully these courses will improve my skills in web development even further. When I am finished with these classes, I will be posting all of the course work on my Github.

Learning JavaScript and Making a full stack Project (current)

(Note: This project is still in Development, this being said, this section will be updated accordingly as development continues) After making my website and also experimenting around a bit more, I felt very confident in my skill in Html and CSS and think it is fair to say that I have a solid grasp on both of them. I decided it was time to learn JavaScript to complete the trinity of Html, CSS, JavaScript. I started reading through w3 schools’ great documentation to learn about JavaScript. I was able to breeze over all of the groundwork of it (variables, classes, functions, arrays, loops, datatypes, constructors) since I am already familiar with these concepts from learning multiple other OO programming languages, all I had to do was get used to the syntax to get comfortable. After that was out of the way, I started learning and experimenting with the DOM functions of JavaScript, which is the real significance of learning this skill, which allows programmers to interact with html and CSS elements with the Object-oriented abilities of JavaScript. Once I feel comfortable enough, with these my plan is to move onto getting an understanding react.js and node.js and use these to make a full stack web application, an endless type of game where users can compete for the high score. I would be bringing all of the technologies I have learned together, including front-end /web development, game development, backend, advanced object-oriented principles, and server admin/ hosting to create a true full stack project. The tech Stack I’ve decided on is. Frontend: HTML, CSS, JavaScript, React.JS. Backend: JavaScript, Node.js. Database: Mongo DB. Hosting: self-hosted ubuntu server, apache2.

Pursuing a M.S. in Cybersecurity at WGU

Immediately following graduation, I will be pursuing my master’s degree in science focusing in Cybersecurity and Information Assurance at Western Governor’s University. The program will focus on secure network design, system administration, IT management, ethical hacking, and secure software development. I decided to pursue this degree because I think it will complement a lot of the skills I already have very well (Linux, OS, servers, networking, system administration, programming, database, web development) as well as make me more marketable on the job market. I am very excited to start the program which I am starting in June following my graduation, in May 2022.

The Future

In the next upcoming years, I am excited to continue this journey in the tech field and learn more about development. My goal is to hopefully land a remote role as a Software Engineer, Full stack Engineer, Cyber Security Engineer, Web Developer, or something closely related. Over the past few years, I think the most important thing I’ve learned is that there is always more to learn, and always more ways to improve your skillset. I am looking forward to continuing to grow, network, and develop as I move forward into my career.

Links