Tarun Jeevan

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PROFESSIONAL SUMMARY

Detail-oriented Software Engineer with a M.S. in Computer Science and a diverse background in software development, application design, and cybersecurity. Adept at handling complex projects, resolving technical challenges, and collaborating with cross-functional teams to deliver performant, reliable software. Skilled in designing, developing, and troubleshooting aesthetically pleasing, performant, and accessible systems and applications. Seeking to contribute to a collaborative team, supporting the design, implementation, and maintenance of high-impact software solutions.

EDUCATION

Master of Science in Computer Science   **May 2024**
Purdue University Fort Wayne   Fort Wayne, IN

Bachelor of Science in Computer Science   **May 2023**
Purdue University Fort Wayne   Fort Wayne, IN

WORK EXPERIENCE

Adjunct Instructor   **Aug 2024 – Present**
St. Charles Community College   *Cottleville, MO 63376*

- Taught intro-level online and in-person courses covering key programming languages such as C++, JavaScript, PHP, Java, SQL, Python, Bash, Powershell, and more used in crucial areas such as web development, database management, system administration, and shell scripting.
- Taught online and in-person courses on the basics of computer security - common vulnerabilities and exploits as well as how to identify, mitigate and handle them - in software, web, and network security.
- Designed and delivered project-based curricula in computer programming, system administration, and cybersecurity fundamentals tailored to students with diverse backgrounds and varying skill levels.
- Created inclusive classroom environments using active learning strategies that emphasized hands-on learning and collaborative problem-solving via small projects and practical assignments.
- Implemented user-centered teaching strategies to enhance student engagement and mentored students in debugging code and solving technical problems in a collaborative environment.
- Gave lectures, assigned and graded homework and quizzes, and fielded questions from students to ensure they gained a sufficient understanding of every topic covered.

Speech and Writing Consultant   **Sep 2021 – May 2024**
Helmke Library, Purdue University Fort Wayne   *Fort Wayne, IN 46805*

- Provided one-on-one and small-group consultations for students of varying backgrounds across diverse disciplines, supporting all stages of the writing process - from brainstorming to revision to final editing.
- Developed and delivered personalized speech coaching sessions to improve student public speaking skills, confidence, and academic communication.
- Assisted students with technical and scientific writing, contributing to stronger documentation skills essential in computing and engineering disciplines.
- Mentored students on the development of communication skills, including technical reports and public speaking, critical for project presentations and engineering team collaboration.
- Wrote and posted engaging blog posts on *The Draft* - the Writing Center's online blog - designed to answer and address various vital or common writing and speaking questions.

Teaching Assistant   **Jan 2024 – May 2024 | Jan 2023 – May 2023**
Purdue University Fort Wayne   *Fort Wayne, IN 46805*

- Worked as a TA for a Computer Architecture course taught by Dr. Jay Johns and a Computer Security course taught by Dr. Zesheng Chen.

- Supplemented instruction by mentoring students in course fundamentals, addressing student concerns on course content and structure, assisting struggling students with assignments, providing further practice via labs or other resources, and mediating between students and the professors.
- Supported student learning objectives through personalized and small group assistance, both in person and via online video chats on Zoom.
- Gauged student understanding of the material through their performance on homework, quizzes, and personal interactions.
- Compiled a report with the above information and reported it to the professor to keep him updated on topic difficulty, areas for improvement, struggling students, and overall student performance.

Game Developer   **Aug 2022 – May 2023**
Aga Pito Studios   *Fort Wayne, IN 46805*

- Worked with four other developers to create a prototype of a 3D action-adventure game in ~8 months using Unreal Engine 5 in accordance with the requirements of our client, Aga Pito Studios.
- Prototype consisted of an Arena level requiring players to fight off increasingly difficult and complex waves of AI enemy NPCs to earn 'gold' that could be spent to buy new weapons and armor.
- Developed the Ranged Combat, Interaction, Inventory, and Quest Systems as modular systems attachable to any game character or component using a combination of C++ and UE's Blueprints.
- Also helped develop the game economy, player HUD, and feature integration into a single codebase.
- **Prototype Download Link**: https://bit.ly/3NgceUB (Google Drive folder)

Information Security Intern   **Jan 2019 – May 2019**
Spectrum, Charter Communications   *Maryland Heights, MO 63043*

- Worked with a team in the Offensive Security and Compliance Strategy department on a project to automate data transfer between test and production servers.
- Assisted with data analysis and report preparation under the guidance of senior team members.
- Engaged in team meetings and contributed creative ideas for solving internal network security issues.
- Completed assigned tasks with attention to detail and within established deadlines.
- Exhibited strong communication skills and professionalism when interacting with clients and team.

PROJECTS

Rust Journey | Skills Used   **Nov 2024 – Present**

- Started a repository and series of blog posts on my portfolio website detailing my progress in learning the **Rust** programming language.
- Primarily followed the official Rust Programming Language book and supplemented my learning with tutorials, blogs, and project ideas found online.
- Completed several smaller programs of increasing complexity while focusing on mastering key Rust concepts and principles such as **Cargo**, **Crates**, and idiomatic Rust.
- Created simple terminal apps such as a tic-tac-toe game, a grep-like CLI tool, and a simple file compression/extraction utility using various Rust crates.
- Developed a fully-fledged 2D snake game using the **Piston** framework with menus, a scoring system, customizable settings, leaderboards, and other features.
- Developed a web server…
- **Repo**: https://github.com/tarunJeevan/rust-journey

Portfolio Website | Skills Used   **May 2024 – Nov 2024**

- Designed, developed, and deployed a portfolio website using **Next.js** and the Vercel platform to showcase my background, education, achievements, and various projects.
- Implemented an embedded blog describing my journey as a developer and detailed reports of my various personal projects, both rendered from easy-to-write **Markdown** files.

- Styled the site using **TailwindCSS** and **Shadcn/ui** for a smooth and visually pleasing user experience.
- Implemented responsive web design by ensuring a smooth user experience for all screen sizes.
- **Repo**: https://github.com/tarunJeevan/portfolio

Expert System on Heart Disease Prediction | Skills Used   **Jan 2024 – May 2024**

- Worked with 4 other developers to develop a software solution satisfying our client's requirements.
- Conducted Requirements Engineering, Software Design, Implementation, Testing, and Deployment.
- We designed and developed an expert system for predicting heart disease risk based on patient medical images, e.g. chest x-rays, leveraging rule-based and machine learning techniques to assist patients in making informed decisions regarding their health.
- Used Python libraries like **Scikit-learn** and **Tensorflow** to create a CNN algorithm to process medical images and predict the likelihood of disease in a patient.
- Optimized algorithm by increasing training samples, varying training epochs, and tuning hyperparameters to achieve an F1 score of 0.48.
- Preprocessed large datasets and created a user-friendly interface through a custom GPT.
- **Jupyter Notebook**: https://github.com/Khurdhula-Harshavardhan/Elevator-Case-Study/tree/Disease-prediction-with-NIH-Chest-XRay-data/Final_Project

Survey Web App Prototype | Skills Used   **Aug 2023 – Dec 2023**

- Collaborated with three other developers for a course project to create a functional web app designed to provide students with a high quality survey creation, distribution, and participation experience.
- Led frontend development using **React.js**, creating an intuitive, responsive, and easy-to-use interface to create and participate in surveys for users with varying levels of computing experience.
- Integrated third-party libraries such as **Survey.js** for survey creation and processing, **Firebase** for authentication, and **Bootstrap** for styling.
- Also handled Unit and E2E testing on the frontend with **Cypress**, writing test scripts for various components and running the tests to ensure they all passed without issue.
- Worked with a team member on developing the backend to handle, process, and store survey data. We developed and integrated **RESTful APIs** with a **ASP.NET Core** server written in **C#**, ensuring secure and efficient data handling and user authentication via Firebase. We designed the database schema and managed storage with **SQL Server**, optimizing access and storage of survey form data and results.
- App was hosted on a team member's personal server for the duration of the course but was taken down when the course ended.
- **Repo**: https://github.com/tarunJeevan/web-dev-survey-app

Prison Island | Skills Used   **Aug 2023 – Dec 2023**

- Designed a survival game in **Unreal Engine 5** (UE 5) as part of an Independent Study research project to test whether video games can be used to develop players' cognitive skills.
- Conducted extensive research into existing scientific literature on the topic and compiled a report summarizing the results and outlining my own proposal to elaborate on existing research.
- The aim of the project was to see if players would internalize the rules and limits of the game - which mimic the real world - and retain other benefits such as improved reaction times.
- Designed a Minimum Viable Product (MVP) that would implement all the core mechanics and principles necessary to demonstrate viability of the project such as basic player character movement and status, basic combat and crafting systems, a single game map, and basic objectives that would require players to explore and experiment with their environment to solve problems.
- Created an incomplete prototype consisting of a playable level and a player character with basic and advanced movement such as running, jumping, crouching, and dashing. I also implemented player status

with health and stamina, an interaction system, and a spatial inventory system to encourage players to exercise their planning and decision-making skills.

- Implemented all features as a combination of **C++** and UE's **Blueprints** with a focus on code extensibility, modularity, and reusability.
- **Repo**: https://github.com/tarunJeevan/prison-island

The Proving Grounds | Skills Used   **Aug 2022 – May 2023**

- Worked with four other developers to create a prototype of a 3D action-adventure game using **Unreal Engine 5** (UE 5) in accordance with the requirements imposed by client Aga Pito Studios.
- Prototype consisted of an Arena level requiring players to fight off increasingly difficult and complex waves of AI enemies in order to earn 'gold' that could be spent to buy new weapons and armor.
- Developed the Ranged Combat, Environmental Interaction, Inventory, and Quest Systems as modular systems attachable to any game component using a combination of **C++** and UE's **Blueprints**.
- Helped develop the game narrative, game economy, player HUD, and integrating separate features into a single extensible and maintainable codebase.
- Developed an unfinished Tutorial level designed to introduce players to basic game systems, quests, combat, and the game economy using Unreal Engine's built-in level editor.
- **Download prototype**: https://bit.ly/3NgceUB (Google Drive folder)

Global Game Jam 2023 | Skills Used   **Feb 2023**

- Collaborated with four other developers to create a functional 2D, side-scrolling platformer using the **Unity** game engine in 48 hours for a game jam.
- Developed the playable character using a freely available sprite and animations. Used Unity's built-in animation systems to animate sprite movement and actions.
- Designed and programmed a character controller in **C#** for a smooth playing experience.
- Programmed a simple but effective combat system with customized animations well-suited for the game narrative and gameplay style.
- **Repo**: https://github.com/spaceowlproductions/GGJ-2023

Student Planner | Skills Used   **Aug 2022 – Dec 2022**

- Collaborated with three developers to create a functional web app designed to help students manage their schedule, take notes, and organize them based on their calendar.
- Created **Express.js** server with a **MongoDB** database to serve static **HTML/CSS** pages to the client
- Conducted unit testing with **Mocha** and **Chai** and set up a **GitHub Workflow** to automate testing.
- Created a Notes page with dynamic note-taking functionality, allowing users to write notes and view them based on the note creation/edit date or user-determined tags.
- **Repo**: https://github.com/tarunJeevan/student-planner/

TECHNICAL SKILLS

Languages | Rust, C/C++, C#, TypeScript, Java, Python, Bash
Web Frameworks | HTML/CSS, React, Next.js, ASP.NET Core, MVC Framework, REST APIs
Database Management | SQL Server, MySQL, MongoDB, ORMs (Mongoose, Entity Framework Core)
Game Development | Unreal Engine 5.X, Unity, Piston, Entity Component System
Developer Tools | Cargo, Git, Docker, Visual Studio , VS Code, Jetbrains IDEs, Trello, JIRA
Methodologies | Agile (Scrum), TDD (Test-Driven Development), Object-Oriented Design
Cybersecurity | Encryption, Hashing, Public Key Infrastructure, Metasploit, Cyber Kill Chain, CIA Triad
Platforms | Windows, Debian Linux (Ubuntu, Kali, etc), Red Hat Enterprise Linux (Fedora)
Educational Skills | Instructional design, Curriculum development, Lesson planning, Assessment and evaluation, Online and hybrid teaching, Student engagement and motivation, Adaptability to diverse learning styles

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Soft Skills | Written & Verbal Communication, Collaboration, Problem solving, Cultural competence
Multilingual | Fluent (English, German, Hindi, Telugu), Intermediate (French)

CERTIFICATIONS

Foundational C# | Microsoft, *July 2024*

Instructional Development and Classroom Engagement | Center for the Enhancement of Teaching and Learning, *May 2024*

Career Essentials in Cybersecurity | Microsoft and LinkedIn, *December 2024*

Career Essentials in System Administration | Microsoft and LinkedIn, *December 2024*

REFERENCES

Jay Johns | Lecturer in Computer Science, Purdue University Fort Wayne
- (260) 481-6343 | jdjohns@pfw.edu

Kristine Frye | Director, Helmke Library Writing Center and Service Desk, Purdue University Fort Wayne
- (260) 481-0257 | kristine.frye@pfw.edu

Zesheng Chen | Associate Professor of Computer Science, Purdue University Fort Wayne
- (260) 481-6187 | chenz@pfw.edu