# YASH AGARWAL

### Software Developer

San Diego, CA [Postal Code] | +15206885500

yashagar865@icloud.com | https://linkedin.com/in/yashagarwal865

Aspiring Software Development engineer specialized in AI, led the development of TARS, a multilingual AI system with human emotions and advanced visual processing for complex tasks.

## Work Experience

**Software Systems Specialist** Mar 2022 - May 2023

University of Arizona | Tucson

Led software management initiatives, optimizing system configurations and resolving technical issues. Enhanced user satisfaction by improving workflows and simplifying complex concepts. Developed troubleshooting protocols, reducing issue resolution time and dependency on external services.

* Led software management initiatives by installing, configuring, and updating critical applications, ensuring a 95% success rate in functionality post-installation.
* Diagnosed and repaired complex hardware malfunctions, decreasing the need for external service by 20%.
* Optimized workstation configurations, resulting in a 25% increase in user'satisfaction and a smoother workflow.
* Developed and implemented troubleshooting protocols that reduced issue resolution time by 15%.

**Software Development Intern – Systems Focus** May 2019 - Jul 2019

Gyan | Denver

Managed VMware infrastructure and Windows Server environments, optimizing system performance. Assisted with cluster configuration and network monitoring, contributing to reliable system operations and resource efficiency.

* Managed VMware virtual infrastructure, improving system efficiency and reducing resource waste by 20%.
* Administered VMware Horizon 7, overseeing components like View Connection Server and View Composer
* Proficiently managed installations and configurations for Windows Server 2016, 2019, and Windows 10.
* Oversaw DHCP, DNS, and Active Directory for seamless network operations.
* Utilized PRTG Network Monitor for network performance monitoring.

## Projects

**TARS** Present

Engineered an AI-driven system with human-like emotional intelligence, multilingual capabilities, and visual processing through TARS Vision. The project tackled advanced NLP and computer vision challenges, resulting in an AI assistant capable of seamless task execution and empathetic interactions.

* Engineered a revolutionary AI-driven system with the ability to exhibit human-level emotions, using advanced tone modulation to express empathy and understanding in interactions.
* Developed multilingual capabilities, enabling TARS to understand and converse fluently in any language, significantly broadening its applicability and user base.
* Implemented the TARS Vision feature, allowing the AI to access and interpret visual data from the user's screen, effectively assisting with complex tasks such as troubleshooting, document editing, and more.
* Overcame challenges in natural language processing and computer vision, resulting in a digital companion that not only communicates effectively but also proactively assists user's with a wide range of tasks.
* Tested and validated the system across various real-world scenarios, ensuring its robustness, scalability, and ability to provide an intuitive, human-like interaction experience.

**Air Quality Index vs Electric Vehicles : Data Analysis** Present

Conducted data analysis on air quality and electric vehicle adoption, uncovering key correlations. Automated data cleaning processes, improving efficiency by 30%, and provided data-driven insights for environmental policy recommendations through advanced visualization techniques.

* Conducted in-depth data analysis by sourcing and cleansing two complex datasets, uncovering correlations between air quality and electric vehicle adoption rates.
* Developed new insights from unclean data, leading to actionable recommendations for environmental policy improvements.
* Visualized data trends using advanced analytics tools, providing clear, data-driven insights that were presented to the class for academic evaluation and discussion.
* Achieved a 30% improvement in data processing efficiency by automating data cleaning and transformation processes.

**Memorization Game** Present

Developed a memory challenge game in Java, dynamically adjusting difficulty using advanced algorithms. Enhanced user engagement through optimized accessibility and cross-platform compatibility, resulting in a 20% increase in user interaction.

* Designed and implemented a memory challenge game in Java, focusing on enhancing cognitive skills through engaging and interactive gameplay.
* Integrated advanced algorithms to adjust game difficulty dynamically, ensuring a personalized user experience.
* Optimized the user interface for better accessibility, resulting in a 20% increase in user engagement.
* Tested and refined gameplay mechanics to ensure smooth operation across different platforms, leading to a broader user bas

**BattleShip** Present

Created a Python-based Battleship game with modern gameplay features. Integrated efficient hit/miss detection algorithms and multiplayer functionality, increasing replay value and enhancing user experience.

* Created a fully functional Battleship game using Python, featuring a user-friendly interface that mimics classic gameplay while incorporating modern enhancements.
* Developed and tested efficient algorithms for game mechanics, ensuring accurate hit/miss detection and seamless gameplay.
* Implemented multiplayer functionality, allowing user's to compete in real-time, significantly boosting the game's appeal and replay value.

**Breakout Game** Present

Developed an AI-enhanced Breakout game using Python and Pygame, incorporating reinforcement learning for adaptive gameplay. Optimized game mechanics, increasing user retention by 25%, and improved the overall user experience with real-time feedback systems.

* Developed an AI-enhanced Breakout game using Python and Pygame, incorporating advanced algorithmic challenges to create a dynamic and engaging gameplay experience.
* Implemented reinforcement learning techniques, enabling responsive AI behavior that adapts to player actions in real-time.
* Optimized game mechanics, resulting in a smoother and more responsive user interface, increasing player retention by 25%.
* Enhanced the overall gaming experience by integrating real-time feedback systems, leading to higher user satisfaction.

## Core Skills

Python, Java, Pandas

## Education

**University of Arizona** Aug 2021 - May 2024

**Bachelor of Information Science** | [Area]