Sarthak Bhatt

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SUMMARY

Dedicated and cooperative graduate student in computer science with a strong desire to comprehend computer mechanics. My skill spans a range of topics, from data structures to artificial intelligence, and is based on analytical thinking and problem-solving. I champion the development of clean, elegant, and robust solutions while emphasizing effective communication and teamwork. Actively pursuing full-time positions starting July 2023.

EDUCATION

Master of Science Degree in Computer Science, California State University, Sacramento — July 2023

Bachelor of Science Degree in Computer Science, UTU, UK, India — May 2016

SKILLS

- Programming languages and Platforms: C/C++, Java, Python, PostgreSQL, Bash, Batch Scripting, Linux, Windows, MacOS.
- GPU architectures: Intel (Kernel Mode Driver and Power and Performance), AMD.
- Driver Development: Windows Driver Kit (WDK), Windbg, KVM GT.
- Software tools**:** Conda, Docker, Git, CMake, QuickBuild, Doxygen, Streamlit, Jira.

EXPERIENCE

Core Graphics Software Engineer **Intel Corporation** Sept 2021 - Aug 2022

- Developed Intel Integrated/Discrete graphics drivers for Intel's present and upcoming platforms tailored for Windows primarily focusing on kernel-mode drivers and graphics memory management along with GPU Scheduling Firmware.
- Developed proficiency with WDDM (Window Display Driver Model) APIs and delved into the graphics pipeline.
- Collaborated in the implementation of Level-0 Sysman for Windows, telemetry, frequency, and power control.
- Validation and debugging of the Intel GPU Graphics Driver under Virtualized Environments like KVM GT under Windows.
- Resolved customer issues involving memory dumps, display screen corruption, timeout, and synchronization issues.

SAP HANA Consultant **Waddaya Solution** May 2015 - Aug 2018

- Demonstrated comprehensive expertise in Data Modelling, Analytical View Development, and user management in SAP HANA.
- Developed and deployed 20+ custom automation tools using Bash and Python; slashed **effort reduction by 50%-60%**.
- Automated system backups and designed real-time monitoring alerts using shell scripting for critical systems.
- Managed Linux-based production servers, ensuring production server uptime and optimal system performance.
- Collaborated with the security team to perform regular audits, and vulnerability assessments and implement best security practices.

PROJECTS

- GPU Telemetry Tool (C++, CMake, Git, QuickBuild): Led a real-time GPU performance project using C++ and CMake for Intel, cutting debug time by 25% and boosting testing accuracy by 30%, and implemented an automated build deployment using QuickBuild, the tool **enhanced the SDLC** and **received formal recognition from Intel.**
- Autonomous Line Follower Robot (C, ATmega168 (Arduino Duemilanove), Motor Driver, Infrared sensor): Successfully designed and implemented a fully functional autonomous line follower robot using an ATmega168 microcontroller, motor driver, and infrared sensors. Utilized the ATmega168 microcontroller for movement control and infrared sensors for path tracking.
- IEEE VAST Challenge 2023 (Python, Networkx, Pyvis, Streamlit, Pandas): Developed and showcased a dashboard tool as a solution to detect Illegal, Unregulated, and Unauthorized (IUU) fishing activities through graph (Network) data. Constructed knowledge graph to extract significant nodes and prune insignificant data.
- A Dashboard for Canines Suffering from CHF (Python, Matplotlib, Plotly, NumPy, Pandas, Scikit-learn, Streamlit): Crafted a dashboard using Streamlit and Scikit-learn in Python that classifies the current condition of canines suffering from Congenital Heart Failure with **98% success rate** with features like generating PDF reports of the patient with interactive charts made in real time just after the user inputs.
- Open-Source Contributor to Pandas library (Python, Data Analysis, GitHub): Actively improved core features and increased overall effectiveness, which benefited the Pandas library's several thousand users. This involvement encouraged an increased knowledge of Python, methods for data analysis, and group development of software in an open-source environment.

PUBLISHED PAPER

Bhatt, **S.**, Jain, P. (2016). **Face Detection & Color Detection Controlled WMR Using MATLAB**. *IJSER*, 7(01), 1601-1603