

Abhay Sharma

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Education

Bachelor of Science in Computer Science / University of Calgary Sept 2019 – Apr 2024

Related Coursework: Algorithms, Data structures, Operating Systems, Computer Network, Multi-threading, Web development, Human Computer Interaction, UX/UI Design

Skills

- **Languages:** Python, C++, C#, Java, JavaScript, SQL, HTML, CSS
- **Databases:** MySQL, MongoDB, Firebase, AWS S3
- **Frameworks:** Django, Flask, ASP.NET, ReactJS
- **DevOps:** Git, Docker, Kubernetes, Jenkins, AWS
- **Networking:** HTTPS, TCP/UDP, WebSocket, SSH, SCP
- **Tools:** Visual Studios, VS Code, Eclipse, WSL, Linux

Professional Experience

University of Calgary, Shakti Lab / Software Researcher Jan 2024 – Present

- Developed and maintained Python Flask applications for lab's backend servers, ensuring 99% server uptime.
- Integrated Twilio microservice for automated phone call assistance, improving customer support capabilities.
- Designed the database schema and integrated Google Firebase for secure storage of user data, ensuring data integrity.
- Deployed Flask application on AWS EC2, including custom domain configuration with AWS Route 53.
- Implemented continuous integration and continuous deployment (CI/CD) pipelines using Jenkins and GitHub Hooks.

IBM Canada / Software Developer Intern May 2022 – Aug 2023

- Crafted 70+ unit and regression test cases using C++, Junit and pytest, leading to 25% decrease in bug rates.
- Reduced testing setup times by 40% by developing automation scripts in bash for DB2 database population.
- Restored TM1 Cognos database integrity by debugging complex C++ engine issues, ensuring proper operation.
- Led two QA engineers to direct the design and implementation of test scenarios for new DB2 versions.
- Implemented internal tools like db2trace and db2track, improving debugging capabilities for DB2 engine issues

Projects

VisionAid / Calgary Hacks Hackathon Winner Feb 2024

- AI-powered wearable device for visually challenged that improving mobility through advanced voice directed navigation, collision detection and context recognition.
- Implemented real-time object and context detection features by integrating OpenCV and Google Gemini Api services.
- Integrated Google Map's Api into the backend Python application for AI generated voice-based navigation.

JobpAlr / Hunter Hub Hackathon Winner Nov 2023

- Job Hunt platform capable of auto-filling applications, AI-driven mock interviews and personalized Job recommendation
- Designed and implemented the web application frontend using Figma, React, HTML, CSS and JavaScript ensuring modular and responsive design.
- Incorporated IBM Watson's Voice to Text API and OpenAI's APIs in the backend to enable mock interview functionality.

Blaze Event Planner Application Apr 2022

- ASP.NET desktop application with Google Maps integration for locating Calgary based events and planning trips.
- Utilized WPF.NET framework and C# to create the application GUI and integrated MySQL server for data storage.
- Developed backend server using Python's Flask framework for processing user requests and authentication.

Leadership Experience

Mental Health for South Asians / Vice president Aug 2021 – Nov 2021

- Led a team of students in crafting, designing, and implementing club's webpage using HTML, CSS, and JavaScript.
- Optimized MySQL database schema achieved 24% improvement in query performance and removed data duplication.
- Implemented data security protocols, including password hashing and data encryption to ensure user data protection.