Nikhil Wilson

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Summary

Motivated and adaptable developer with 3 years of experience, including 2 years in government-sponsored projects and 1 year in ERP solution development. Skilled at quickly learning and applying new technologies, with a strong passion for DevOps. Seeking an opportunity to contribute and grow within a dynamic DevOps team.

Skills Summary

- **Version Control**: Git, GitHub, GitLab
- **CI/CD Tools**: GitLab CI
- **Cloud Platforms**: Azure
- **Containers** & **Orchestration**: Docker, Kubernetes
- **Database Management**: MongoDB, MySQL
- **Monitoring** & **Logging**: Prometheus, Grafana
- **Configuration Management**: Ansible
- **Scripting**: Bash, Python, JavaScript
- **Linux Administration**: Ubuntu
- **ML frameworks**: Sklearn, Tensorflow, Pytorch, Rapids.Ai

Experience

- **CSIR - National Chemical Laboratory, Pune**
  Project Associate-I (Full-time) *July 2022 - September 2024*
  - **Machine learning models for solid state hydrogen storage**: Worked on a government-sponsored project focused on solid-state hydrogen storage, developing machine learning models and Analyzed data to provide valuable insights and improve material performance predictions.
  - **Web-application for predicting alloy properties using ML models**: Built multiple web applications for utilizing ML models and predict user input compositions properties.
- **Gensys Business solutions, Angamaly**
  Junior developer (Full time) *July 2018 – July 2019*
  - **Development of application screens**: My role involved designing and developing multiple application screens using the ASP.NET framework within an MVC code architecture.

Certifications

- **Microsoft Certified: Azure Administrator Associate (AZ-104)**:
  Credential ID: ED50759B42295F83
  Certification number: 538B0A-I5C007
  Online certification page link

Cloud Projects

- **3-Tier Architecture in Azure**: Designed and implemented a highly available and scalable 3-tier architecture in Azure, incorporating: Web-tier with VM Scale Sets and Application Gateway for load balancing. App-tier with internal load balancer for optimal traffic distribution. Database-tier with high availability configuration. Read more in blog!
- **Personal Website - Azure Static storage website**: Developed and deployed a personal website using Azure storage with enhanced delivery and accessibility. Utilized Azure CDN for global content delivery. Implemented custom domain mapping with Azure CDN endpoint. Visit website
  Read more in blog!

Projects

- **Web-application for prediction of hydrogen storage properties of metal alloys**: Developed multiple web-application for the HEART framework, allowing users to input compositions and calculate multiple hydrogen storage properties by integrating machine learning models. Built the application with Python's Flask module and deployed in remote cluster using Docker container for portability.
- **Machine learning models for prediction of metal alloys hydrogen storage properties**: Worked towards developing deep learning models using PyTorch and Tensorflow for crystal structure stability. Utilized Nvidia container toolkit for building GPU optimized docker containers in remote supercomputers. Built an updated database comprising the latest materials and compositions, optimized for the machine learning models.
- **Experiment logger mobile application**: Developed a react-native application for logging experimental results in NCL, Pune. Utilized expo to build the application, Express.js as backend and MongoDB as the database.
- **Developed screens for VIBS-explorer ERP solutions**: Built multiple screens for the VIBS-explorer ERP solutions for Gensys Technologies, UAE. Development in ASP.net framework using C#, HTML/CSS, JavaScript and MVC architecture.

Publications

- **"HyStor: An Experimental Database of Hydrogen Storage Properties for Various Metal Alloy Classes"**: Nikhil Wilson, Ashwini Verma, Piyush Maharana, Ameeya Bhusan Sahoo and Kavita Joshi. International Journal of Hydrogen Energy(April, 2024), https://doi.org/10.1016/j.ijhydene.2024.09.390
- **"Solid state hydrogen storage: Decoding the path through machine learning."** : Ashwini Verma, Nikhil Wilson, and Kavita Joshi. International Journal of Hydrogen Energy 50 (2024): 1518-1528. https://doi.org/10.1016/j.ijhydene.2023.10.056

Education

- **Central University of Punjab** — Bhatinda, India
  M.Sc - Theoretical and Computational Chemistry; GPA: 7.42 — *July 2020 - June 2022*
- **St. Stephen's College** — New Delhi, India
  B.Sc (Honours) - Chemistry; GPA: 6.57 — *July 2015 - June 2018*