

# Abhinav Kumar Singh

abhinavsingh.dev

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## EDUCATION

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- **The University of Melbourne** Melbourne, Victoria  
*Master of Information Technology; WAM: 84.00* *Feb 2019 – Jan 2021*
- **SRM Institute of Science and Technology** Chennai, India  
*Bachelor of Technology in Information and Telecommunication; GPA: 9.8* *Aug 2012 – July 2016*

## EXPERIENCE

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- **WooliesX** Melbourne, Australia  
*Senior ML Engineer* *Mar 2022 – Present*
  - **Intelligent Offer Allocation:** Engineered and fine-tuned high-impact machine learning models to optimize offer allocation, directly driving a measurable increase in incremental sales and enhancing customer engagement by over 16%.
  - **Real-Time Behavioral Targeting:** Developed and implemented deep learning models that leverage real-time customer behavioral data to dynamically display personalized content, resulting in a 10% increase in engagement and conversion rates.
  - **Modelverse Development:** Led the design and implementation of Modelverse, an in-house, end-to-end MLOps platform that empowered data practitioners at WooliesX. Modelverse seamlessly integrated MLflow for versioning and collaboration, supporting high-scale, high-density, and frequently-changing model serving use cases. It significantly reduced deployment time while enhancing model governance and operational efficiency across teams.
  - **Advanced MLOps:** Implemented automated pipelines and scalable deployments, utilizing Python, PyTorch, Kubernetes (K8s), Docker, and MLflow, resulting in a 40% reduction in time-to-market for machine learning solutions.
  - **Data-Driven Marketing:** Championed the integration of data-driven insights into marketing strategies, enabling personalized customer experiences that significantly boosted customer satisfaction and loyalty.
  - **Cross-Functional Collaboration:** Worked closely with diverse teams to ensure seamless end-to-end deployment of machine learning models, maintaining high standards of reliability, scalability, and performance in production environments.
- **Servian** Melbourne, Australia  
*ML Engineer* *Oct 2021 – Mar 2022*
  - **Personalized Recommendation Systems:** Led the development of scalable recommendation algorithms, leveraging collaborative filtering, content-based models, and deep learning techniques to provide tailored product recommendations. Improved customer satisfaction and engagement metrics by 8%, while driving incremental revenue for clients in retail and media industries.
  - **End-to-End Machine Learning Deployment:** Designed and deployed advanced machine learning pipelines, seamlessly integrating real-time recommendation models into production. Employed Python and PyTorch to build a modular, reusable framework that enabled rapid iteration and deployment of machine learning models at scale.
- **6Clicks** Melbourne, Australia  
*AI Engineer* *Feb 2021 – Oct 2021*
  - **Hailey AI Engine Development:** Played a pivotal role in designing and enhancing the Hailey AI Engine, central to 6Clicks' GRC platform. This AI-powered engine revolutionized how businesses automate and accelerate compliance processes, enabling users to achieve in seconds what previously took days.
  - **NLP Integration:** Leveraged advanced Machine Learning (ML) and Natural Language Processing (NLP) to develop capabilities such as Compliance Mapping and Policy Gap Analysis, which provided instant insights into overlaps between internal controls and external compliance requirements, streamlining risk and compliance management.
  - **Platform Integration:** Ensured the seamless integration of the Hailey AI Engine into the multi-tenanted platform, enhancing functionality and providing real-time, AI-driven insights that added substantial value to users.
- **EY** Bengaluru, India  
*Associate Consultant* *Aug 2016 – Sep 2018*

- **Solution Automation:** Spearheaded the end-to-end development of tailored automation solutions across industries such as supply chain, banking, asset management, HR, and accounts. Optimized operations, reduced manual workloads, and significantly increased process efficiency from initial analysis to production deployment, leading to measurable business improvements for clients.
- **Robotics Centers of Excellence (CoE):** Played a key role in establishing and scaling enterprise-wide Robotics Centers of Excellence (CoE) for clients, leveraging deep technical expertise to overcome complex challenges. My contributions facilitated strategic growth, enabling clients to adopt and expand automation technologies that drove sustainable, long-term efficiency gains.

## TECHNICAL SKILLS

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- **Programming Languages and Frameworks:** Python, Golang, TensorFlow, PyTorch, Kubeflow, Kubernetes, FastAPI, HTML, CSS, Javascript
- **Database:** PostgreSQL, MongoDB, Google BigQuery, Google BigTable, Google Firestore
- **Tools:** Git, Jira, Jenkins, Github, Docker, Terraform, VS Code, Postman, Cursor
- **Cloud:** Google Cloud, Microsoft Azure

## HONORS AND AWARDS

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- **Melbourne Engineering Scholarship** Melbourne, Victoria  
*University of Melbourne* *Feb 2019 – Jan 2021*
- **SRM Engineering Scholarship** Chennai, India  
*SRM Institute of Science and Technology* *Aug 2012 – July 2016*