

Ayush Subedi

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SUMMARY

- 13+ years of experience across AI research, machine learning, and data science leadership—successfully bridging foundational R&D with high-impact, production-grade solutions.
- Proven track record as both a Principal AI Scientist and Head of Data/AI, leading cross-functional teams to deliver scalable architectures, ML platforms, and data-driven product innovation.
- Extensive R&D expertise in algorithm design, dataset curation, and applied AI across domains such as fraud detection, transportation, climate science, and LLM-based systems.
- Strategic thinker and hands-on problem solver, adept at navigating ambiguity, designing end-to-end systems, and operationalizing novel research into measurable business value.
- Influential leader and mentor with experience building data organizations from the ground up, driving stakeholder alignment, and fostering inclusive, high-performance AI teams.

EXPERIENCE

- **CloudFactory** Greater Reading Area, UK
Staff Data Scientist *Jul 2021 – Present*
 - Led 25+ cross-functional staff (data science, engineering, BI), including 8 Data Scientists and R&D members focused on AV Lidar, workforce modeling, fraud, simulation, and unsupervised learning.
 - Built automated ground truth validators for AV Lidar, cutting QA costs by \$50K/year and boosting throughput by 30%, supporting \$1M+ in AV partnerships.
 - Created the Worker Performance Profile—an ML-based metric used for task allocation, improving delivery efficiency by 50%+.
 - Led fraud detection efforts using rule systems, entropy models, ML, and Agentic AI saving \$600K+ via early intervention and prevention.
 - Developed pricing/simulation frameworks to derisk pilot engagements and secure \$250K+ in client contracts.
 - Advised teams on CV/NLP, metric design, A/B testing, sampling, MLOps, and experimentation methods.
 - Championed the BI-to-AI shift—overhauling infra, ML-enabling datasets, and driving a predictive-first analytics culture.
- **Code for Nepal** Kathmandu, Nepal
Chief Executive Officer *Oct 2021 – Present*
 - Led a 20+ member team delivering open data, AI, and analytics projects on Nepal's census, digital divide, and gender equity, impacting citizens, journalists, and researchers.
 - Led a \$1M partnership with DataCamp, providing scholarships and mentorship to 5,000+ learners, boosting data science education access in Nepal.
 - Developed an open-source analytics platform for real-time census data exploration, promoting transparency in a low-resource environment.
 - Scaled community engagement via hackathons, data meetups, and workshops, collaborating with global AI researchers, LLM practitioners, and civic tech experts.
 - Pioneered LLM and geospatial tech experiments for public good, fostering innovation culture among 500+ volunteers.
- **Correlation One** New York City, NY, USA
Instructional Partner *Mar 2022 – Aug 2022*
 - Collaborated with Harvard and Yale professors on Amazon's flagship Career Choice Data Analytics Program, transforming careers of frontline associates through data education.
 - Trained and mentored 50+ Amazon warehouse associates in foundational and advanced analytics, guiding several into full-time data roles across industries.
 - Supported curriculum delivery, hands-on labs, and capstones on Excel, SQL, Python, and data storytelling, bridging theory with practical application for adult learners.
 - Served as a coach and career mentor, contributing to the mission of democratizing access to high-demand data careers.

- **The British College**
Visiting Faculty of Data Science

 - Designed and developed Master’s level curricula in Business Intelligence, Data Science, and Machine Learning, covering advanced topics such as predictive modeling, algorithm optimization, and data-driven decision-making for Nepal.
 - Taught five semesters of graduate-level courses in Data Science and Machine Learning, delivering in-depth lessons on statistical learning, deep learning, data engineering, and AI applications to 26 students on average per class.
 - Led the integration of hands-on, project-based learning, utilizing real-world datasets and advanced data tools (Python, R, TensorFlow, SQL) to bridge the gap between theoretical knowledge and industry applications.
 - Mentored students in developing independent research projects focused on AI/ML models and data-driven solutions to business and societal challenges. Many students have since advanced to roles in leading data science teams both in Nepal and abroad.
 - Collaborated with industry professionals and academic experts to ensure curriculum relevance, integrating best practices in machine learning, big data analytics, and cloud-based solutions for industry and government applications.

Kathmandu, Nepal
Sep 2019 - Nov 2021
- **World Bank**
Data Scientist

 - Designed and implemented a proxy-based statistical literacy indicator for Nepal using NLP and topic modeling on 100,000+ news articles, published in a World Bank report to inform national data policy discourse.
 - Consulted Nepal’s Financial Comptroller General Office (FCGO) on machine-readable data standards for government expenditure and revenue datasets, aligning them with international metadata frameworks and improving fiscal transparency.
 - Analyzed geospatial movement and telco data in collaboration with Meta’s Data for Good program to assess the real-time impact of the 2019 Nepal Floods, developing interactive flood vulnerability maps for disaster risk reduction.
 - Led the Nepal Data Literacy Program, training 200+ professionals across academia, civil society, media, and government in AI/ML, statistics, survey design, Python, and Tableau.
 - Developed AI-enabled metadata augmentation tools for improving the quality, discoverability, and standardization of open datasets, paving the way for automated documentation pipelines.
 - Integrated ML-driven data fusion techniques, blending geospatial layers with survey microdata for tasks like poverty prediction, population estimation, and sub-national forecasting.
 - Contributed to the publication ”Use of Data in the Private Sector of Nepal” (World Bank, July 2020), providing policy recommendations to strengthen private-sector data ecosystems.

Kathmandu, Nepal
Mar 2019 – Jul 2021
- **BP Eye Foundation**
Principal Scientist, Machine Learning

 - Developed and deployed predictive models for diabetic retinopathy and glaucoma using advanced machine learning algorithms, achieving over 90% accuracy, sensitivity, and recall to improve early detection and patient outcomes.
 - Led end-to-end development of a web application integrating predictive models into clinical workflows, featuring patient authentication, tracking, and disease progression monitoring, streamlining healthcare operations.
 - Incorporated real-time model enhancement features into the web app, allowing for continuous learning and adaptation to new patient data, ensuring long-term effectiveness in dynamic healthcare environments.
 - Developed an annotation tool based on consensus scoring for accurate medical image labeling, leveraging crowdsourced expertise to ensure high-quality training datasets representing clinical variability.
 - Collaborated with clinical experts to fine-tune models, aligning them with healthcare standards and contributing to better diagnosis accuracy and reduced manual errors in patient assessments.
 - Delivered real-time analytics and reporting tools for clinicians, enabling data-driven decisions that improved care delivery efficiency and minimized healthcare costs through early-stage intervention.
 - Coauthored and published the paper ”Use of Telemedicine and Artificial Intelligence in Eye and ENT” in AIST 2023, discussing AI and telemedicine integration for healthcare accessibility in resource-limited settings.

Kathmandu, Nepal
Sep 2020- Jun 2021
- **Moonlit Solutions**
Chief Data Scientist, Co-founder

 - Developed a high-accuracy (90%) machine learning model for banking anomaly and fraud detection, reducing fraudulent activities and losses for a Silicon Valley startup in the banking sector, utilizing advanced anomaly detection techniques in real-time deployment.

Kathmandu, Nepal
Dec 2018 - Apr 2021

- Conducted a comprehensive feasibility study for a karaoke bar, combining Voronoi analysis, sentiment analysis, and ROI estimation to inform location selection and market strategy, driving business growth.
- Analyzed and visualized the environmental impact of Himalayan glaciers, processing 3,000+ data points and presenting findings through interactive dashboards, raising awareness of climate change effects in Nepal.
- Defined the technical architecture for Trove, a privacy-centric encrypted bookmark manager, utilizing clustering algorithms for article summarization and ensuring secure storage and data privacy.
- Led the creation of a strategic business dashboard for My Second Teacher, delivering real-time insights into KPIs and user actions, which became a core tool for business stakeholders' decision-making.
- Authored multiple proposals in areas such as hackathons, user segmentation, data analysis for FMCGs, and software development, driving client-focused innovations that contributed to business growth.
- Mentored cross-functional teams, ensuring timely and impactful delivery of customized solutions to complex business challenges.

• Tootle

Kathmandu, Nepal

Chief Data Scientist

Dec 2018 - Jan 2021

- Led strategic planning and data analysis across multiple projects, delivering data models, predictive algorithms, and market clustering solutions, directly improving operational efficiency and customer retention.
- Drove operational profitability by optimizing marketing spend, balancing cost management, and enhancing customer retention strategies, fueling consistent business growth while maintaining profitability margins.
- Designed and implemented churn prediction models, identifying at-risk drivers and passengers, resulting in a 60% decrease in churn and an increase in lifetime user value.
- Developed market clustering algorithms to identify high-potential locations, driving targeted marketing campaigns and improving service availability by 150%.
- Played a key role in deploying scalable machine learning models for real-time decisions on ride pricing, driver incentives, and demand forecasting, enhancing operations and user experience.
- Collaborated cross-functionally with product, engineering, and marketing teams to integrate data-driven insights into strategic decisions, enhancing business agility and customer-centric initiatives.
- Improved customer and driver engagement by integrating predictive analytics to forecast demand, adjusting supply accordingly, and reducing wait times by 200%.

• Tootle

Kathmandu, Nepal

Chief Technology Officer

Aug 2015 - Dec 2018

- Led the launch of Nepal's first motorbike ride-sharing platform, developing the MVP and securing seed investment, laying the foundation for the company's growth.
- Built and managed a team of 35 engineers and staff, scaling the platform to handle 10,000+ daily rides, establishing it as the primary transportation solution in Nepal.
- Secured £500,000 in grant funding from GSMA, driving platform expansion and the development of key features, significantly enhancing transportation infrastructure.
- Designed and implemented scalable system architectures to support real-time ride matching, dynamic pricing, and driver incentives, ensuring stability and user satisfaction.
- Collaborated with local government bodies to address regulatory challenges, improving infrastructure and ensuring sustainable business growth in the competitive transportation sector.

• Three60

Kathmandu, Nepal

Principal Software Engineer

Oct 2013 - Nov 2018

- Led the development of Tootle, Nepal's first motorbike ride-sharing platform, taking it from prototype to a fully standalone entity, scaling to support thousands of daily rides and transforming urban transportation in Nepal.
- Innovated real-time tracking for Sajha buses by mapping GSM signal strength through user devices, providing accurate bus location data and contributing to smarter urban transportation solutions.
- Designed and developed Edcrayon, a comprehensive educational management platform aimed at improving classroom experiences and education management in developing countries.
- Co-developed Edquake in partnership with UNESCO, a game-based platform educating users on earthquake preparedness and resilience, empowering communities in earthquake-prone regions.
- Partnered with OXFAM to develop Thaha Chha, an app offering legal documentation and protection services for single women in Nepal, improving access to legal rights and enhancing women's safety.
- Collaborated with UNESCO to design Neo-Literacy, a local-language educational app to improve literacy rates in underserved populations in developing countries.

- Co-created a Disaster Vulnerability Mapping and Contingency Planning platform with OXFAM, enabling communities to assess disaster risk and improve preparedness and response.
- Co-developed the Swahili Literacy Application with Seeds of Empowerment and Stanford University, improving literacy rates in East Africa and enhancing educational access for marginalized communities.

Lees Tax City

Indianapolis, IN, USA

Technology Operations Manager

Jun 2013 - Sept 2013

- Engineered and deployed robust web and NAS servers, establishing the organization's digital infrastructure, enabling secure data access, reliable backups, and seamless internal operations.
- Designed and developed the organization's website using Joomla CMS, delivering a responsive and user-centric platform that strengthened the organization's digital identity and effectively showcased services.
- Administered and optimized SQL databases for the company's point-of-sale (POS) system, ensuring real-time transactional efficiency, data integrity, and generating actionable insights through custom reporting.
- Drove brand engagement by designing impactful advertisements, digital assets, and website content, enhancing the company's online footprint and client conversion.
- Implemented IT operations best practices, including version control, system monitoring, and backup protocols, ensuring system resilience and business continuity.
- Provided technical support and training to internal staff, improving operational efficiency and enabling smoother adoption of new systems and tools.

Loras College

Dubuque, IA, USA

Graphic Designer at The Lorian

Dec 2011 - July 2013

- Led design direction for print and digital editions of one of America's oldest collegiate newspapers, crafting compelling layouts, infographics, and feature spreads to elevate visual storytelling.
- Captured photojournalistic coverage of campus events, sports, and student life, contributing 200+ original images featured across front-page stories, editorials, and special issues, boosting readership and engagement.
- Introduced a unified visual style guide and modernized templates using Adobe InDesign and Photoshop, reducing layout production time and improving consistency across issues.
- Directed creative content strategy in collaboration with editors, ensuring visual elements reinforced editorial tone and message, resulting in a 40% increase in positive reader feedback.
- Designed promotional materials such as posters, digital banners, and social media visuals, increasing event visibility and student participation.
- Mentored junior designers and photographers on layout, composition, and editing, strengthening the creative pipeline within the student media team.

EDUCATION

Georgia Institute of Technology

Atlanta, GA

Master of Science in Analytics (Computational/ML Track); GPA: 3.91

2021 - 2023

Loras College

Dubuque, IA

Bachelor of Science in Computer Science and Mathematics; GPA: 3.84

2009 - 2013

PUBLICATIONS

- **AIST 2023 · March 17, 2023** Use of telemedicine and artificial intelligence in Eye and ENT: a boon for developing countries
- **World Bank Group · Jul 1, 2020** Use of Data in the Private Sector of Nepal : The Current State and Opportunities in Finance, Education, and the Media
- **IEEE 2015 · Dec 16, 2015** Use of ICT in Classrooms in Nepal; A study of Student-Centered Learning using ICT

PROGRAMMING SKILLS

- **Languages:** Python, SQL, Spark, R, Java, C++, JavaScript, Rust
- **Tools & Tech:** ML, GenAI, PyTorch, Agentic AI, MLOps, LangChain, Docker, Git, AWS (S3, Lambda, SageMaker, Bedrock)
- **Databases:** DuckDB, BigQuery, Redshift, Snowflake, PostgreSQL, Pinecone, FAISS, MongoDB