

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 DS 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

Kathmandu, Nepal
Sep 2019 - Nov 2021

 - 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.
- World Bank**
Data Scientist

Kathmandu, Nepal
Mar 2019 – Jul 2021

 - 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.
- BP Eye Foundation**
Principal Scientist, Machine Learning

Kathmandu, Nepal
Sep 2020- Jun 2021

 - 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.
- Moonlit Solutions**
Chief Data Scientist, Co-founder

Kathmandu, Nepal
Dec 2018 - Apr 2021

 - 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.

- 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 **Technologies:** ML, AWS, GenAI, Pytorch, Agents, Warehousing