

Baltimore, Maryland
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Suman Kunwar

Researcher/ Software Engineer

Portfolio: sumankunwar.com.np
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An experienced software engineer and researcher with two products that ranked in the top 10 on Product Hunt, recipient of the People's Choice Award at Code for Humanity Open Hack Stockholm (2020), and third place in Facebook's 2019 Developer Circles (Asia Pacific). I am the author of the book Learn JavaScript: First Edition, which has garnered 925 plus GitHub stars, and the instructor of the course Web 101: Building Portfolios with HTML, CSS, and JavaScript, with over 4,600 students.

SKILLS AND INTERESTS

Tools and Languages	JavaScript, CSS3, GIT, HTML5, Docker, Jenkins, S3, Flutter, Python, Flutter, Cloudfront, Rollbar, Webpack, Prettier, Figma, CI/CD, MySQL, MongoDB, Keras, Pandas, Seaborn, Tensorflow, YOLO, Flask, Langchain
Interests	AI, Climate Change, Sustainability, Entrepreneurship
Communication	English, Nepali (fluent speaker)

TECHNICAL EXPERIENCE

Co-Founder **Dec 2024 — Present**
ENME enmeapp.com / Remote

- Created a skincare product recommendation app that detects skin type and provides tailored instructions along with product recommendations.

Researcher / Creator **Jan 2024 — Present**
D.Waste dwaste.live / Baltimore

- Developed a state-of-the-art waste classification machine learning model with an accuracy of 96.37%, integrated into an app designed to classify waste and provide effective management tips.
- Created a comprehensive waste dataset consisting of 19,407 images across 10 categories, utilized in various scientific research studies.
- Implemented the app for both online and offline use, making it accessible on Android and iOS platforms.
- Developed an open-source image annotation tool capable of automatic image annotation.
- Authored and published research papers that benchmarked various deep learning models, explored green technologies, and introduced a custom waste dataset and annotation tool.

Frontend Consultant **Jan 2022 — Oct 2023**
Latana GmbH latana.com / Remote

- Assisted in making decisions regarding architecture, scalability, caching, security, hosting, and configuration for Mobile Ad Surveys written in PreactJS with RecoilJS.
- Collaborated closely with peers, UX/UI designers, and product managers to establish features and project estimates, while maintaining code quality, diagnosing bugs, and implementing new features.
- Organized regular, structured meetings to mentor team members and provide guidance for their work and future careers.
- Designed and conducted experiments to measure, optimize, and improve mobile survey performance across DSP platforms such as Beeswax and AdLib, utilizing MRAID technology.

Frontend Developer **Jan 2019 — Dec 2021**
Dalia Research GmbH (Acquired by Purespectrum) daliaresearch.com / Berlin, Germany

- Partnered with UX/UI designers and backend developers to transform design concepts into a fully functional admin dashboard using ReactJS.
- Crafted clean, maintainable, and efficient code with ReactJS and Styled Components to develop a platform enabling people to participate in surveys.
- Enhanced the speed and performance of the VueJS survey interface while collaborating with the Quality Assurance team to establish automated end-to-end testing procedures.

Senior Software Engineer **Feb 2015 — Dec 2018**
Fusemachines Inc / Fusemachines Nepal fusemachines.com / Kathmandu, Nepal

- Led the team in developing the frontend of the learning platform, written in TypeScript and ReactJS, utilizing a REST API.
- Played an integral role in migrating the lead generation and campaign outreach platform from EmberJS to ReactJS.
- Collaborated with backend engineers, product managers, designers, and QA to design and structure the learning platform.

EDUCATION

Doctor of Philosophy in Computer Science, Selinus University of Sciences & Literature

PGCert in Entrepreneurship, Coventry University

GCert in Entrepreneurship, Deakin University

Master of Science in Information Technology, Sikkim Manipal University

Bachelor of Science in Information Technology, Sikkim Manipal University

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CERTIFICATIONS

Natural Language Processing Specialization (DeepLearning.AI)	Coursera
Meta Front-End Developer Certificate (Meta)	Coursera
Full Stack Web Development Specialization (The Hong Kong University of Science and Technology)	Coursera

PUBLICATIONS

Published

- Managing Household Waste Through Transfer Learning . Industrial and Domestic Waste Management, 4(1), 14–22. <https://doi.org/10.53623/idwm.v4i1.408>
- Kunwar, S., Ferdush, J. (2024). Mapping of Land Use and Land Cover (LULC) Using EuroSAT and Transfer Learning. Revue Internationale de Géomatique, 33(1), 1–13. <https://doi.org/10.32604/rig.2023.047627>
- Kunwar, S. (2024). Comprehensive Image Quality Assessment (IQA) of JPEG, WebP, HEIF and AVIF Formats. OSF. <https://doi.org/10.31219/osf.io/ud7w4>
- Kunwar, S. (2023). MWaste: An app that uses deep learning to manage household waste. Clean Technologies and Recycling, 3(3), 119–133. <https://doi.org/10.3934/ctr.2023008>
- Kunwar, S. (2023). Convolutional Neural Network (CNN) to reduce construction loss in JPEG compression caused by Discrete Fourier Transform (DFT). In: Zhao, F., Miao, D. (eds) AI-generated Content. AIGC 2023. Communications in Computer and Information Science, vol 1946. Springer, Singapore. https://doi.org/10.1007/978-981-99-7587-7_25
- Kunwar, S., & Simeon Alade, A. (2023). Strategies in JPEG compression using convolutional neural network(CNN). International Journal of Research Publication and Reviews, 4(7), 1024–1032. <https://doi.org/10.55248/gengpi.4.723.48514>
- Kunwar, S., (2024). Annotate-Lab: Simplifying Image Annotation. Journal of Open Source Software, 9(103), 7210. <https://doi.org/10.21105/joss.07210>
- Kunwar, S., Alade, A.S. (2024) Deep Learning in Waste Management: A Brief Survey. Int. J. of Complexity in Applied Science and Technology <https://doi.org/10.1504/IJCAST.2024.10068247>
- Kunwar, S., Owabumoye, B. R., & Alade, A. S. (2025). Plastic Waste Detection Using Deep Learning: Insights from the WaDaBa Dataset. Industrial and Domestic Waste Management, 5(1), 1-11. <https://doi.org/10.53623/idwm.v5i1.580>

ACTIVITIES

Instructor for Web 101: Building Portfolios with HTML, CSS, and JavaScript Course (Udemy)	Dec 2023
Learn JavaScript : Beginners Edition, Author (Leanpub Publication)	Jan 2023
Social Psychology Community Mentor, Wesleyan University (Coursera)	Oct 2018 — Aug 2020
Node.js Certification Committee Member, Node.js Foundation	Mar 2017 — Jul 2017
Mentor for HTML, CSS and JavaScript Course, Hong Kong University of Science and Technology (Coursera)	Oct 2016 — Jan 2017

AWARDS

Maker of Deep Waste App, Top 10 Product of the day Recipient (Product Hunt)	Feb 2023
Code for Humanity Open Hack Stockholm 2020- People Choice Award Recipient	Nov 2020
2019 Developer Circles from Facebook Community Challenge, Regional - Third Place Recipient (Asia Pacific)	Nov 2019
Maker of Mood Mingle , Top 10 Product of the day Recipient (Product Hunt)	Oct 2018

REFERENCES

Available upon request.