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# Suman Kunwar

## Software Engineer / Researcher

Portfolio: [sumankunwar.com.np](https://sumankunwar.com.np)  
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An experienced software engineer and researcher, I have two products that made it into the top 10 on Product Hunt. I am the recipient of the People's Choice Award at Code for Humanity Open Hack Stockholm (2020) and secured third place in the Asia Pacific region for the 2019 Developer Circles by Facebook. Additionally, I am the author of "Learn JavaScript: First Edition" and the creator of the "Web 101: Building Portfolios with HTML, CSS, and JavaScript" course.

### SKILLS AND INTERESTS

<b>Tools and Languages</b>	JavaScript, CSS3, GIT, SASS, Styled Components, Emotion, Bootstrap, React JS, Vue JS, Jest, Cypress, React Testing Library, HTML5, Travis CI, Jenkins, S3, Flutter, Python, Flutter, Cloudfront, Rollbar, Webpack, Prettier, Figma, CI/CD, MySQL, MongoDB, Keras, Pandas, Seaborn, Tensorflow
<b>Interests</b>	Social Enterprise, Open Source, Sustainability
<b>Communication</b>	English, Nepali (fluent speaker)

### TECHNICAL EXPERIENCE

<b>Machine Learning Researcher</b> <i>D.Waste</i>	<b>Jan 2024 — Present</b> <a href="https://dwaste.live/">dwaste.live/</a> Houston
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- Developed a state-of-the-art waste classification machine learning model and implemented it in an app to help manage waste.
- Enabled the app to work both online and offline and made it available on both Android and iOS platforms.
- Published papers that benchmarked various deep learning models, discussed green models and created a custom waste dataset and image annotation tool.

<b>Frontend Consultant</b> <i>Latana GmbH</i>	<b>Jan 2022 — Oct 2023</b> <a href="https://latana.com/">latana.com/</a> Remote
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- Assist in making decisions regarding architecture, scale, caching, security, hosting, and configuration concerning Mobile Surveys written in PreactJS with RecoilJS.
- Collaborate closely with peers, UX/UI designers, and product managers to establish features and project estimates, while managing existing codebases to maintain code quality, diagnose bugs, and incorporate new features.
- Organize regular, structured meetings to guide mentees and provide direction for their work and future careers.

<b>Frontend Developer</b> <i>Dalia Research GmbH (Acquired by Purespectrum)</i>	<b>Jan 2019 — Dec 2021</b> <a href="https://daliaresearch.com/">daliaresearch.com/</a> Berlin, Germany
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- Partner with UX/UI designers and backend developers to transform design concepts into a fully functional admin dashboard using ReactJS.
- Craft clean, maintainable, and efficient code with ReactJS and Styled Components to develop a platform enabling people to participate in surveys.
- Enhance the speed and performance of the VueJS survey interface while collaborating with the Quality Assurance team to establish automated end-to-end testing procedures.

<b>Senior / Software Engineer</b> <i>Fusemachines Inc / Fusemachines Nepal</i>	<b>Feb 2015 — Dec 2018</b> <a href="https://fusemachines.com/">fusemachines.com/</a> Kathmandu, Nepal
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- Lead the team in developing the frontend of the learning platform, written in Typescript and ReactJS, utilizing REST API.
- Be an integral part of the development team, contributing to the migration of the lead generation and campaign outreach platform from EmberJS to ReactJS.
- Collaborate with Backend Engineers, product managers, designers, and QA to design and structure the learning platform.

### EDUCATION

<b>Doctor of Philosophy in Computer Science</b> , <i>Selinus University of Sciences &amp; Literature</i>	Dec 2022
<b>PGCert in Entrepreneurship</b> , <i>Coventry University</i>	2020 — 2021
<b>GCert in Entrepreneurship</b> , <i>Deakin University</i>	2020 — 2021
<b>Master of Science in Information Technology</b> , <i>Sikkim Manipal University</i>	Jul 2016
<b>Bachelor of Science in Information Technology</b> , <i>Sikkim Manipal University</i>	Jul 2014

### CERTIFICATIONS

Full Stack Web Development Specialization (The Hong Kong University of Science and Technology)	Coursera
Meta Front-End Developer Certificate (Meta)	Coursera

### PUBLICATIONS

#### Published

- Kunwar, S. (Jan 2024). Managing Household Waste through Transfer Learning. Industrial and Domestic Waste Management Journal. <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](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>

#### In Press

- Kunwar, S., Alade, A.S. (2024) Deep Learning in Waste Management: A Brief Survey. (Int. J. of Complexity in Applied Science and Technology)

#### In Review

- Kunwar, S.(2024) Annotate-Lab: Simplifying Image Annotation. (Journal of Open Source Software)

### 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