Suman Kunwar

Software Engineer / Researcher

(936) 465-8926
Baltimore, Maryland
sumn2u@hotmail.com

Portfolio: sumankunwar.com.np
github.com/sumn2u
linkedin.com/in/sumn2u

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 900 plus GitHub stars, and the instructor of the course Web 101: Building Portfolios with HTML, CSS, and JavaScript, with over 4,000 students.

SKILLS AND INTERESTS

Tools and Languages	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 , YOLO, Flask, Langchain
Interests	Social Enterprise, Open Source, Sustainability
Communication	English, Nepali (fluent speaker)

TECHNICAL EXPERIENCE

Full Stack Developer/ Researcher   Jan 2024 — Present
D.Waste   *dwaste.live/ Houston*

- Developed a state of the art waste classification machine learning model with an accuracy of 96.37%, integrated it 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 which has been 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 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*

- Assist in making decisions regarding architecture, scale, caching, security, hosting, and configuration concerning Mobile Ad 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.
- Designed and conducted experiments to measure, optimize, and improve mobile survey performance across DSP platforms such as Beeswax, AdLib, and others, utilizing MRAID technology.

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

- 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.

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

- 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

PGCert in Entrepreneurship, *Coventry University*	2020 — 2021
GCert in Entrepreneurship, *Deakin University*	2020 — 2021
Master of Science in Information Technology, *Sikkim Manipal University*	Jul 2016
Bachelor of Science in Information Technology, *Sikkim Manipal University*	Jul 2014

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

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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
- 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

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)

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.