



Akshay BALLAL
Eindhoven/Netherlands | +31-645791146
arballal95@gmail.com
www.akshaymakes.com
[github](#) | [linkedin](#)

SUMMARY

Versatile AI Engineer with a background in Mechanical Engineering. Currently pursuing an MSC. in Artificial Intelligence and Engineering Systems at Eindhoven University of Technology. Proven leadership as Chief Product Officer, driving R&D initiatives and securing 7 patents in composites and additive manufacturing. Extensive expertise in machine learning, software development, and engineering.

EDUCATION

EINDHOVEN UNIVERSITY OF TECHNOLOGY, NETHERLANDS 2023 - Present

MSC. ARTIFICIAL INTELLIGENCE AND ENGINEERING SYSTEMS

- ML Team Lead at Serpentine AI - research group developing AI models for brain signal processing.

BIRLA INSTITUTE OF TECHNOLOGY, MESRA 2013-2017

BACHELOR OF ENGINEERING - MECHANICAL ENGINEERING

EXPERIENCE

ASML November 2024 - Present / Netherlands

MACHINE LEARNING INTERN

- Working on identifying process drift with optical sensor data
- Using uncertainty estimation with Bayesian Inference methods to make the algorithm more robust.
- Implementing Mechanistic Interpretability techniques like Sparse Autoencoders and Post-hoc XAI like GradCam.

FABHEADS AUTOMATION December 2019 - July 2023 / India

CHIEF PRODUCT OFFICER

- Spearheaded product strategy contributing to the successful launch of innovative products and features.
- Directed cross-functional Software and Hardware teams to ensure the timely delivery of high-quality products.
- Co-inventor of 7 patents in the fields of Additive Manufacturing and Composites.

FABHEADS AUTOMATION July 2017 - December 2019 / India

HEAD, ENGINEERING

- Pioneered the development of Asia's first carbon fiber 3D printer by leading a team of skilled engineers.
- Successfully managed concurrent mechanical, electrical, and software projects.

PROJECTS

EMBEDANYTHING February 2024 - Present

[HTTPS://GITHUB.COM/STARLIGHTSEARCH/EMBEDANYTHING](https://github.com/starlightsearch/embedanything)

- Multi-Modal Embedding creation library built in Rust.
- 300 GitHub stars and over 90,000 downloads.

SKILLS

PROGRAMMING LANGUAGES *Experienced:* Python | Typescript | Dart | Rust *Familiar:* Matlab | C++

SOFTWARE DEVELOPMENT GIT | CLI | Agile Methodology | Experiment Tracking

FRAMEWORKS & LIBRARIES PyTorch | Tensorflow | Numpy | Pandas | Scikit-learn | Weights and Bias |

WEB DEVELOPMENT SvelteKit | Flutter | Firebase | FastAPI

LANGUAGES *Native:* Marathi *Fluent:* English *Beginner:* Dutch