

# Dipankar Sarkar

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Passionate researcher in the field of Machine learning, Cryptography and Distributed Systems. An experienced entrepreneur who has previously raised money from venture capitalists with a deep understanding of various internet verticals. Author of a book on Nginx, the world's most popular web server. Published a paper on Federated Learning at IJCAI in 2020 and assisted with filing over 60 provisional patents in augmented reality, virtual reality, image processing, messaging and cryptography.

## Education

- 2020 – 2022 **M.Sc. Arizona State University** in Computer Science.  
Specialisation in Cyber-Security (GPA: 3.96/4.0)
- 2003 – 2007 **B.Tech Indian Institute of Technology** in Computer Science.  
Project: *Detecting unusual human activity using video.* (GPA: 7.5/10)

## Research Publications

### Conference Proceedings

- 1 N. Kumar, S. Goel, A. Narang, *et al.*, “One shot audio to animated video generation,” arXiv, 2021. [DOI: 10.48550/ARXIV.2102.09737](https://doi.org/10.48550/ARXIV.2102.09737).
- 2 **D. Sarkar** and M. Gupta, “Curriculum generation using autoencoder based continuous optimization,” arXiv, 2021. [DOI: 10.48550/ARXIV.2106.08569](https://doi.org/10.48550/ARXIV.2106.08569).
- 3 **D. Sarkar**, A. Narang, and S. Rai, “Fed-focal loss for imbalanced data classification in federated learning,” Accepted for the Workshop on Federated Learning for Data Privacy and Confidentiality in Conjunction with IJCAI 2020 (FL-IJCAI'20), 2020. [DOI: 10.48550/ARXIV.2011.06283](https://doi.org/10.48550/ARXIV.2011.06283).
- 4 **D. Sarkar**, S. Rai, and A. Narang, “Catfedavg: Optimising communication-efficiency and classification accuracy in federated learning,” arXiv, 2020. [DOI: 10.48550/ARXIV.2011.07229](https://doi.org/10.48550/ARXIV.2011.07229).

### Journal Articles

- 1 **D. Sarkar**, “Muzzled: A graphical theme builder for mozilla,” *Linux Gazette*, vol. 119, 2005.

### Books and Chapters

- 1 **D. Sarkar**, *Nginx 1 Web Server Implementation Cookbook*. Packt Publishing, 2011.

## Employment History

- 2021 – 2022 **Co-Founder** Boom Labs, a decentralised marketing protocol built on the blockchain.
- 2019 – 2021 **Machine Learning Lead** Hike Limited, India's largest messenger and now casual gaming startup.
- 2017 – 2021 **Principal architect** Nykaa (Publicly Listed), India's largest lifestyle ecommerce.
- 2017 – 2019 **Co-Founder** ExpressMOJO, A logistic classifieds and freight matching service.
- 2013 – 2016 **Co-Founder** Octo.ai, Raised \$250K for building the future of marketing data platforms.




## Miscellaneous Experience

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### Certification






2018  **Graduate Certificate, Strategic Studies.** Awarded by The Takshashila Institute.

### Awards and Achievements

- 2021  **Eta Kappa Nu - Engineering honor society of IEEE**, for excellent academic performance.
- 2019  **Westerwelle Young Founder**, went to represent my logistics startup ExpressMOJO in Germany.
- 2005  **Top 100 ICSE students**, Among the top students in Kolkata.

## Skills

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| Languages          |  | Strong reading, writing and speaking competency in English. Reading and speaking competency in Hindi and Bengali. |
| Coding             |  | Pytho, Ruby, Rust, Java, PHP, R, SQL, XML/XSL, $\LaTeX$ , ...   |
| Databases          |  | MySQL, PostgreSQL, HSQL, SQLite.  |
| Other technologies |  | HTML, css, JavaScript, Nginx, Apache Web Server, Tomcat Web Server.   |
| Misc.              |  | Startups, academic research, training, consulting, $\LaTeX$ typesetting and publishing.                           |

## References

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