## Abdul Rahim

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EDUCATION University of Regensburg, Faculty of Informatics and Data Science

Master of Science (M.Sc.), Human-Centred Artificial Intelligence (HCAI)

Panjab University, Chandigarh College of Engineering and Technology 2020–2024

Bachelor of Engineering (B.E.), Computer Science and Engineering (CSE)

PUBLICATIONS Rahim, A. et al. (2025). Integrating Machine Learning into Cardiovascular Disease Risk Prediction: A Com-

prehensive Analysis of Cholesterol, Heart Rate, and Gender Impact on Disease Prevalence. In: Kumar, A., Swaroop, A., Shukla, P. (eds) Proceedings of Fourth International Conference on Computing and Communication Networks. ICCCN 2024. Lecture Notes in Networks and Systems, vol 1292. Springer, Singapore.

https://doi.org/10.1007/978-981-96-3250-3\_23

EXPERIENCE & INTERNSHIPS

## **Open Source Developer, Open Pocket Organization**

August 2025-present

2025-present

- Developed an open-source alternative to GetPocket, a "read-it-later" service that lets users save and organize online articles
- Designed and implemented a RESTful backend using Fastify and TypeScript, fully compatible with the original GetPocket API specification

**Linux Kernel Mentorship Program, Linux Foundation** (Supervised by: *Shuah Khan*) Sept–Nov 2024

- Made 7+ contributions in mainline Linux kernel
- Mitigated linear overflow vulnerabilities and fixed bugs, enhancing overall system security

## Software Developer Intern, Gemini Solutions Pvt. Ltd.

Jan 2024-May 2024

- Designed and developed an Automated Report Generation system, reducing the time required to create client reports by 90%
- Collaborated with cross-functional teams to debug & fix client code, ensuring high-quality deliverables and compliance with SLA's

TRAINING

**Data Science**, National Institute of Technical Teachers Training and Research

June 2023–July 2023

• Learned data pre-processing, model training, and evaluation techniques. Implemented linear, polynomial, decision tree, and random forest regression algorithms

SKILLS Languages Typescript, Javascript, SQL, HTML, CSS, Python, Bash Scripting, C/C++, LATEX

Cloud AWS (EC2, S3, IAM etc.), Docker, Terraform, Terminal text editors (Vim/Emacs), ssh Backend Node.js, Express.js like frameworks (e.g. Fastify), REST API development, Postgres

MongoDB, Redis, Git, Drizzle ORM, Vitest, Bruno, reguar expression, JWT

Python & ML pandas, numpy, sklearn, matplotlib, seaborn

N. Languages English (C1), Deutsch (A1)

PROJECTS Open Pocket – Backend server (Github)

- Designed and developed a stateless, horizontally scalable backend for the Open Pocket platform
- Defined optimized PostgreSQL schemas and implemented caching with Redis to improve performance
- Utilized Drizzle ORM for type-safe database interactions, schema migrations, and robust query handling
- Implemented access and refresh token mechanisms using JWT for secure, stateless authentication
- Integrated Passport.js to support multiple authentication strategies with encrypted cookie-based sessions ensuring scalability
- Wrote unit tests with Vitest and performed API testing using Bruno

Game playing agent (Github)

• Developed a space shooter game from scratch using the Unity engine. Created a Reinforcement Learning (RL) agent for the game, trained using "Proximal Policy Optimization"

Web3 Decentralised Application (Dapp) (Github)

• Developed a Dapp for secure content sharing on the internet. Implemented ownership via the ERC1155 token standard on the Ethereum blockchain

Web interface for git repositories (Link)

• An open source, light, and fast web-based git repository viewer based on stagit. Re-designed the UI, implemented syntax highlighting and language auto-detection

VOLUNTEERING EXPERIENCE

## **United Nations Volunteers Program**

July 2024-August 2024

• Collaborated with the African Association of Entrepreneurs to launch social media campaign. Registered new members and initiated fundraiser to support the organization

EXTRA-CURRICULARS **Leetcode** (*leetcode.com/u/abdulrahim2002*): Solved 800+ questions on leetcode with 12k+ solution views **GRE:** Cleared GRE exam with 323/340 marks. Scored perfect 170 in Quantitative section