Abdul Rahim

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EDUCATION

Panjab University, Chandigarh College of Engineering and Technology   2020–2024
Bachelor of Engineering (B.E.) in Computer Science and Engineering (CSE)

Data Structures, Analysis and Design of Algorithms, Microprocessors, Operating Systems, Theory of Computation, Neural Networks, Advanced Database Systems, Computer Networks and Security (*see details*)

PUBLICATIONS

Integrating Machine Learning into Cardiovascular Disease Risk Prediction: A Comprehensive Analysis of Cholesterol, Heart Rate, and Gender Impact on Disease Prevalence

Accepted for publication at ICCCNet 2024 in the upcoming Springer LNNS

EXPERIENCE & INTERNSHIPS

Linux Kernel Mentorship Program (*see contributions*)   Sept. 2024–present
- Among 48 candidates selected worldwide, to improve the Linux Kernel
- Mitigated linear overflow vulnerabilities in the Linux Kernel, enhancing overall system security
- Replaced insecure, deprecated APIs in kernel sources with safer alternatives, improving code safety
- Fixed a bug in kselftest, improving the debugging experience

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 client code, ensuring high-quality deliverables
- Proposed novel solutions in testing framework, to meet client requirement

TRAINING

Data Science, National Institute of Technical Teachers Training and Research   June 2023–July 2023
- Learned data preprocessing, model training, and evaluation approaches. Implemented linear, polynomial, decision tree and random forest regression algorithms

SKILLS

Languages	C, Python, Bash/Batch Scripting, C++, HTML, CSS, JavaScript, LaTeX, C#, Assembly, Ocaml, SQL, MATLAB
Cloud	AWS (EC2, S3...), Docker, Terraform
Linux	Kernel module programming, kselftest, custom Kernel compilation, systemd
Technologies	Git, gdb, GNU Make, Terminal editors (Vim/Emacs), Game Development (Unity Engine), ML-Agents (Unity), REST APIs, distributed ledgers, MongoDB

PROJECTS

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" *Schulman et.al. 2017*

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

VOLUNTEERING EXPERIENCE

United Nations Volunteers Program   July–August 2024
- Collaborated with the African Association of Entrepreneurs to raise awareness about entrepreneurship opportunities in Africa. Registered new members and initiated a fundraiser, to support the association

Community-run effort   June 2024–present
- Participated in a community-run initiative providing free meals to patients and their families outside PGI Hospital, assisted in distribution and resource management to ensure efficient operations