# Tejas Vipin

SRM Institute of Science and Technology • Kattankulathur • Chennai, India

## Contact

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## Skills

C\C++, Python, Rust, Linux, Device Drivers, Compilers, Embedded Systems, Machine Learning, Systems Programming, Containerization, LLM, Docker, CI/CD, Transformers, Git

## Experience

**Directorate of Student Affairs, SRMIST**                                          Nov. 2022 - Aug. 2023
*Web Developer*

- The Directorate of Student Affairs organizes a national level cultural fest called Milan.

- Worked on the website of Milan 2023 along with the DSA tech team.

- Created a backend system for routing and interacting with the MongoDB instance, capable of handling thousands of concurrent requests and integrated it with the frontend.

**Linux Kernel**                                                                    Jun. 2024 - Present
*Contributor to DRM subsystem*

- The Direct Rendering Manager is a subsystem in the kernel that contains the code and drivers for managing graphics related hardware.

- Optimized several display panels that use MIPI DSI by reducing generated code size and improving the internal API.

**LLVM**                                                                            Jan. 2025 - Present
*Contributor to MLIR*

- LLVM is a modular, open-source compiler framework designed to optimize and generate intermediate and machine-level code for a wide range of programming languages and architectures.

- Optimized MLIR generation for operations involving 0 dimensional vectors. Optimized and worked on unit test architecture involving the same.

**Wayland**                                                                         Jul. 2024 - Present
*Contributor to Wayland core protocol*

- Wayland is a modern display server protocol for Linux and other Unix-like operating systems.

- Streamlined error handling in several parts of the core wayland protocol.

# Projects

### Jane Street Real Time Market Data Forecasting Competition

- Participated in a Kaggle competition involving prediction of the performance of high frequency trading algorithms used by Jane Street for Quantitative Trading.
- Came up with several different strategies of data processing and prediction to increase accuracy and speed.

### Crime Detection and Classification using Deep Learning

- Detected and classified different classes of crime using RNNs and Transformers.
- Came up with several different novel strategies of analyzing video data to increase inference speed and accuracy.
- Finalized and contrasted different competing cutting edge models to come up with a final model that outperforms all current existing models for this task.

# Education

**SRM Institute of Science and Technology**                                      Kattankulathur, India
*B Tech Computer Science and Engineering with Specialization in Cloud Computing*                *2022 - 2026*