Subramanya J

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Education

- **B. M. S. College of Engineering** Sept. 2023 – Sept. 2027
  B.E. Computer Science and Engineering *GPA: 9.72/10*
- **V. V. S. BM Sri Educational Institutions** 2021 – 2023
  Pre-University *Percentage : 96%*

Contributions

- **pwmt/zathura** — A document viewer.
  - Identified a rendering bug caused by improper quickmark evaluation, where a file's zoom value was restored without considering the current adjust mode (best-fit, width), leading to truncated rendering and crashes. Issue #761
  - Authored and submitted a fix ensuring correct application of adjust mode during quickmark evaluation to stabilize navigation. PR #762
  - Implemented in C using the Girara library

Projects

- **scep** — A recursive scanner for hex color literals.
  - Implemented a zero dependency C program that scans directory trees for #RGB, #RRGGBB, and #RRGGBBAA color codes using memory-mapped files.
  - Wrote a custom directory walker that uses depth first search and respects simple gitignore rules for minimal memory usage to keep file system overhead low.
  - Improved execution time by manually buffering the output, effectively amortizing calls to write().
- **feed** — An RSS feed aggregator.
  - Created a basic real-time Really Simple Syndication (RSS) feed aggregator that collects feeds from sites specified in a JSON file.
  - Uses a dedicated Vercel-hosted backend running Node.js to fetch and normalize feeds.
  - Hosted online at https://subramanyaj.github.io/feed using GitHub Pages.
  - Implemented using Node.js, HTML, Javascript and CSS.
- **errcheck.h** — A library for error handling in C.
  - Provides macros to capture syscall return values and compare them against explicit expected conditions.
  - Centralizes errno preparation, evaluation, optional reset, and perror() invocation in one place.
  - Enables uniform, inline error checking around syscalls without duplicating comparison and errno handling logic.

Skills

- Languages: C, x86 Assembly, JavaScript
- Developer Tools: Docker, git, gdb
- Build Systems: Meson with Ninja, CMake with Make

Courses Studied

- Operating Systems
- Database Management Systems
- Analysis and Design of Algorithms
- Advanced Algorithms
- Computer Organization and Architecture
- Object Oriented Java Programming
- Theoretical Foundations of Computation
- Computer Networks