LLVM.org Website Redesign

Introduction to my GSoC 2024 Project

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15 May 2024
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Education:
B.Tech Mechanical Engineering, National Institute of Technology Srinagar, India

Field of interest:
Web Development, DevOps, UI/UX Design

Experience
● Full Stack Web Developer (Part Time) - Zalco Technologies
● Mobile Developer (Internship) - Flix Logix

Technologies
● Programming Languages: Javascript, Typescript, Python, Bash.
● Frontend Technologies: React.js, HTML, CSS, Tailwind CSS, SCSS.
● Backend Technologies: HUGO, Express.js, MongoDB, Firebase.
● Devops & Tools: Git and GitHub, GitHub Actions, Docker, Linux, Vim.

Contact
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Improve the LLVM.org Website Look and Feel

The LLVM Compiler Infrastructure

LLVM Overview

The LLVM Project is a collection of modular and reusable compiler and runtime technologies. Despite its name, LLVM has little to do with traditional virtual machines. The name "LLVM" itself is an acronym for the full name of the project: "Low Level Virtual Machine.

LLVM began as a research project at the University of Kentucky, with the goal of providing a compiler, DSE-based compilation strategy, capable of supporting both native and dynamic compilation of arbitrary programming languages. Since then, LLVM has grown to be an actively maintained project consisting of a number of subprojects, many of which are being used in production by a wide variety of commercial and open source projects as well as being widely used in academic research.

The primary sub-projects of LLVM are:

1. The LLVM compiler is a modular compiler system and toolset. Its component parts are organized in a way that allows easy extension and combination.
2. Clang is an LLVM-based C/C++ compiler. It compiles C/C++ code, with a focus on producing high-quality machine code. The Clang compiler is used to build highly optimized code for a variety of platforms.
3. The LLVM project supports professional development by providing a powerful and comprehensive toolset. It is also designed to be a fast and low-cost alternative to other open-source compilers.
4. The project is also being used in a wide variety of commercial and open-source projects as well as being widely used in academic research.

Upcoming Events

- ACM Software System Award

- LLVM Release Announcement

Mentors:
- Tanya Lattner
- Vassil Vassilev
Project Goals

- Create a modern LLVM.org website.
- Improve navigation, mobile support, and accessibility.
- Engage community for consensus on changes.
- Enhanced Content Discoverability and Usability.
- Scalability and Future-Proofing.
Why this project?

- Alignment with Skills and Passions
- Community Impact
- Personal Growth
- Project Significance
Project Timeline

Planning and Research
- Content Audit Survey
- Request for Comments (RFC)

Development and Implementation
- Implementing using HUGO
- Separation of Data & Visualisation

May
- Content Audit Survey
- Request for Comments (RFC)

June
- Designing 3 mockups
- Interacting with community for iterations

Jul-Aug

Sept-Nov
- Deployment
- Addressing feedback
Initial Steps

- User Survey
- Request For Comments
- Designing Mockups

Which sections of the website do you find most valuable? (Select all that apply)

- [ ] Documentation
- [ ] Downloads
- [ ] Blog
- [ ] Community forums
- [ ] Events and conferences
- [ ] Other...
Anticipated Challenges

- Navigating the community
- Gathering feedback
- Achieving consensus
How to Get Involved

- Provide Feedback
- Contribute to Content
- Spread the Word
Thank you!