Manasij Mukherjee

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Areas of Interest:

- Compiler Construction, Optimizations and Program Analysis
- Programming Language Design and Functional Programming
- Graph Theory

Relevant Experience:

- **Apple Internship (Summer, 2015)** :
  I interned at Apple's Developer Tools department, on the LLVM Source Tools team, working on tools based on the Swift and Clang compilers.
- **Google Summer of Code (Summer, 2014)** :
  - **Organization** : **CERN**
  - **Project** : Cling name auto detection and library autoloading.
  - **Brief Description** :
    Cling is a C++ interpreter based on clang and LLVM, developed at CERN to be used as the UI of the ROOT data analysis tool. My primary task was to implement interactive hints for missing required headers in user code.
  - **Proposal** : Link **Git Commits**: Link **Final Presentation**: Link
- **Personal Projects**:
  - **Spider** : A graph visualization framework with a DSL for manipulating graphs.
  - **Minlisp** : A LISP interpreter I created in high school just after getting interested in compilers.
  - **Pedant** : A simple clang tool for catching inconsistently named identifiers in codebases.
  - A general purpose C++ graph library.
  - A minimal C++ abstraction layer over modern OpenGL.
  - A Logo (turtle graphics) environment using above library.

Technical Skills:

- **Programming Languages** : **C++** and several others including C, Python, Haskell.
- **Development Tools** for version control, debugging, build systems, profiling.
- Good knowledge of Linux environment and internals gained from 7+ years of using Linux.
- Navigating large codebases and related documentation.
- Picking up new technology (programming languages, frameworks) quickly.
- Experience with frameworks like LLVM, Qt, OpenGL.

Education:

- **Chennai Mathematical Institute** : M.Sc. Computer Science (2015-17) *ongoing
- **St. Xavier's College, Kolkata** : B.Sc. Computer Science (2012-15)

Other Misc. Achievements:

- 19th National Rank in the JEST exam, 2015.
- 5th position in National Cyber Olympiad, 2008.