GMRES Project

Applied Linear Algebra

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**Abstract**

This project objective is to create a set of tools to that mainly help with operating and manipulating on sparse matrices in compressed sparse row (CSR) format. The library I chose to implement cover most of the basic operations, which will be discussed later in this paper, for *Vectors*, *Dense Matrices* and *CSR Matrices*. The focus of this project and paper is the Generalized Minimal Residual (GMRES) method/algorithm. This paper is an overview of the tool set mentioned above, the implementation of GMRES and some statistics produced by GMRES.

1. Introduction
2. Vector Library