The Pioneers Engineering Notebook

Team 6121C

VEX Turning Point (2018-19)

Contents

1 Introductory Information

1.1 Preface

This notebook is the story of team 6121C throughout the VEX 2018-19 season, Turning Point. It is designed to be an organized description of our design, build, and programming processes.

1.2 Use of Git Version Control

Our use of Git has helped us keep track of our files. Everything electronic we do (code, CAD, etc.) is tracked using Git version control to keep track of the iterations those files have gone through.

1.3 Use of LaTeX

This year, we decided to use LaTeX to make our notebook. This helps us have a cleaner notebook and use Git version control with it as well. LaTeX is a typesetting system designed for technical and scientific documentation. We feel that using LaTeX helped us be more efficient in documenting our team.

1.4 About the Team

1.4.1 History of 6121C

Team 6121C The Pioneers planted their seeds during the VRC 2016-17 season, Starstruck. Head by veteran roboteer Neil Muglurmath, they ranked 6th and earned the Tournament Semifinalist award in their first regional compeition of the season, qualifying them for the state qualifier. At the Eastern PA State Championship, they were semifinalists in their division and won the Build Award.

The team stepped up their game in the VRC 2017-18 season, In The Zone. It was comprised of one member, Neil Muglurmath, for a large part of the season. In his first tournament of the season, he recieved the Tournament Semifinalist award. After a rebuild, he acquired both Tournament Champion and Excellence awards in his second regional compeition of the season. After improving upon his second iteration, he obtained the Excellence Award once again, along with being a Tournament Semifinalist. By now, 6121C had qualified for the CREATE U.S. Open Robotics Championship, which consists of 200 VRC teams around the country, but unfortunately there was no more space to compete. After a rebuild for the Eastern PA State Championship, the team took home the Tournament Champion Award, qualifying them for the VEX Robotics World Championship in Louisville, Kentucky. Here, they ended with a record of 5-5 and 44th in the Research Division.

1.5 Team Biographies

1.5.1 Team Leadership

- Neil Muglurmath
  - Team Captain
  - President of CHS Robotics
  - He is head builder and programmer
  - Is responsible for the purchases of building materials the 6121 series needs to be successful
  - Recruits new members for CHS Robotics
  - Gives presentations about CHS Robotics to School District board members
  - Leads CHS Robotics meetings
  - Plans competetition schedule of CHS Robotics
  - Assists newer members of the club
  - Assists middle school teams
  - Is responsible for keeping a standard of build and programming quality
  - Head driver

1.5.2 Member Biographies

- Neil Muglurmath
  - This marks my 5th year working with VEX Robotics, after one year of using VEX parts for Science Olympiad, one year on VEXMEN Team 81Y:Cypher, and two years on 6121C. My main interests include building, computer science, and sports. I am now a junior at Conestoga High School.

1.6 Team communication

1.6.1 Schoology

Schoology is a Learning Management System used by the TE School District. Because students are already used to Schoology's UI, we thought it would be a good idea to use Schoology for communication within CHS Robotics. In Schoology, both the leaders of the club and the mentor are able to post updates about club meetings, compeitions, and more.

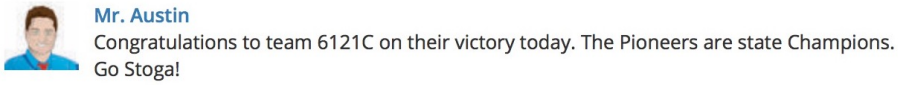

Figure 1: Example Schoology post from last season.