# SENIOR PROJECT DEFENSE

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### PROJECT PROBLEM STATEMENT AND PURPOSE

- <u>Problem</u>: finding an access image editor where all features are accessible without paying for premiums or certain features.
- <u>Purpose</u>: to construct a C++ project constructing a Bulk image manipulation tool. This manipulation tool would have features grouped and divided by capabilities. For instance color filters, image properties, etc)

# PROJECT LANGUAGE(S), SOFTWARE, AND HARDWARE

- C++
- QT Framework
- QTCreator IDE

#### RESEARCH AND BACKGROUND

- no background or knowledge of QT. Therefore, I had to research and experiment with the QT software.
- I also did research on specific classes built into QtCreator such as MainWindow, Qimage, QLabel. Throughout the process I had to research:
  - examples and tutorials built into the IDE
  - Online documentation

# PROJECT REQUIREMENTS

- High priority requirements that I wanted application meet included:
  - The user should be able to upload their desired image
  - The product shall be easy to use by many demographics with little to no training
  - The application should allow the user to save and download the modified version of the image to their device
  - The editing features should be neatly organized by category
  - The program should have multiple basic editing functions to alter an image
  - The program should be easily accessible and readily available to anyone

#### TESTING AND TEST RESULTS

- To test usability, I had people of different age groups use the program to see if they could manage all capabilities of the program using criteria determined by the project requirements.
- Testing suggested it was easy to use for all age groups
- Feedback included suggestions for the program interface and adding more editing functions.

#### CHALLENGES OVERCOME

- I mostly struggled with finding documentation to meet my specific needs for this project.
  - Documentation was more targeted towards those that were already familiar with QT and the classes that go together.
- getting familiarized with the QtCreator IDE.

#### **FUTURE ENHANCEMENTS**

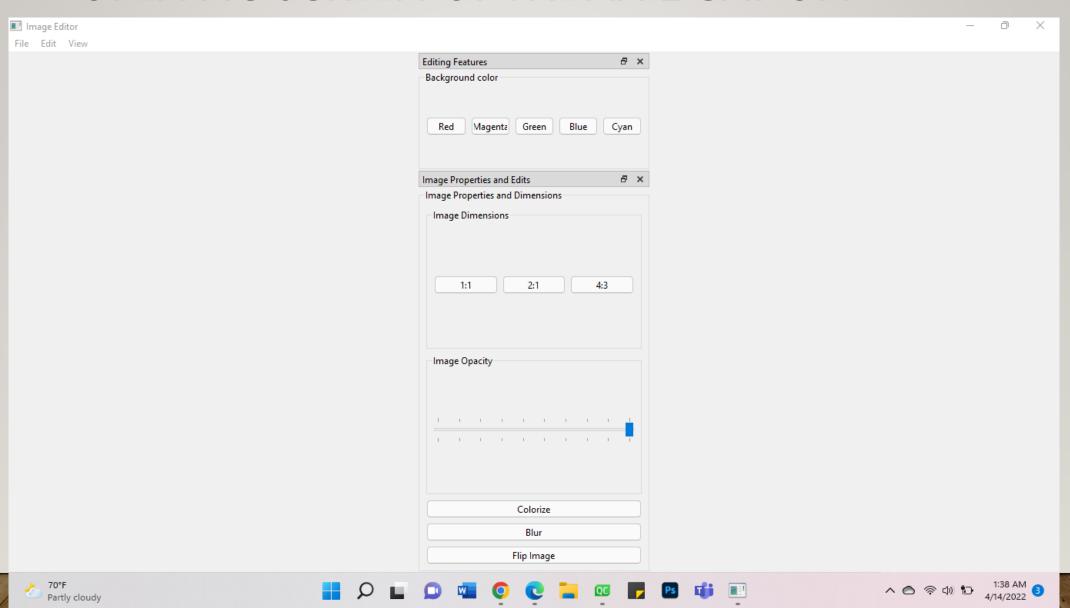
- Undo button
- Drop down menu to select which editing tabs are displayed
- More advanced editing features such as white balance, etc.

# ANY QUESTIONS??

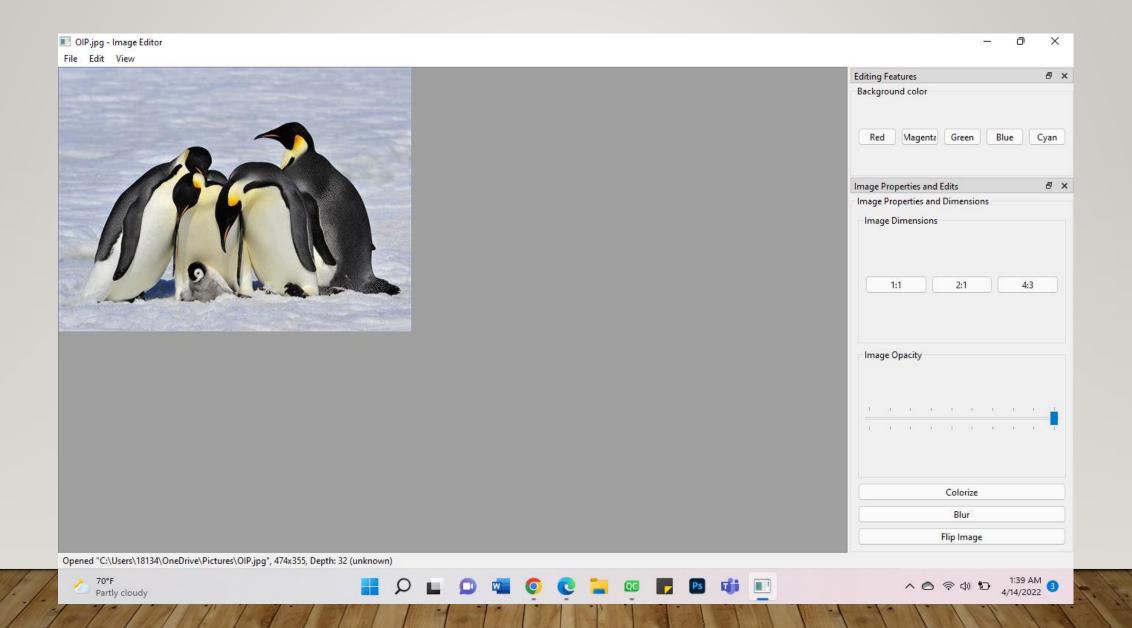
#### **DESIGN AND FEATURES**

• In the upcoming slides we will review the application interface and the features that can be utilized...

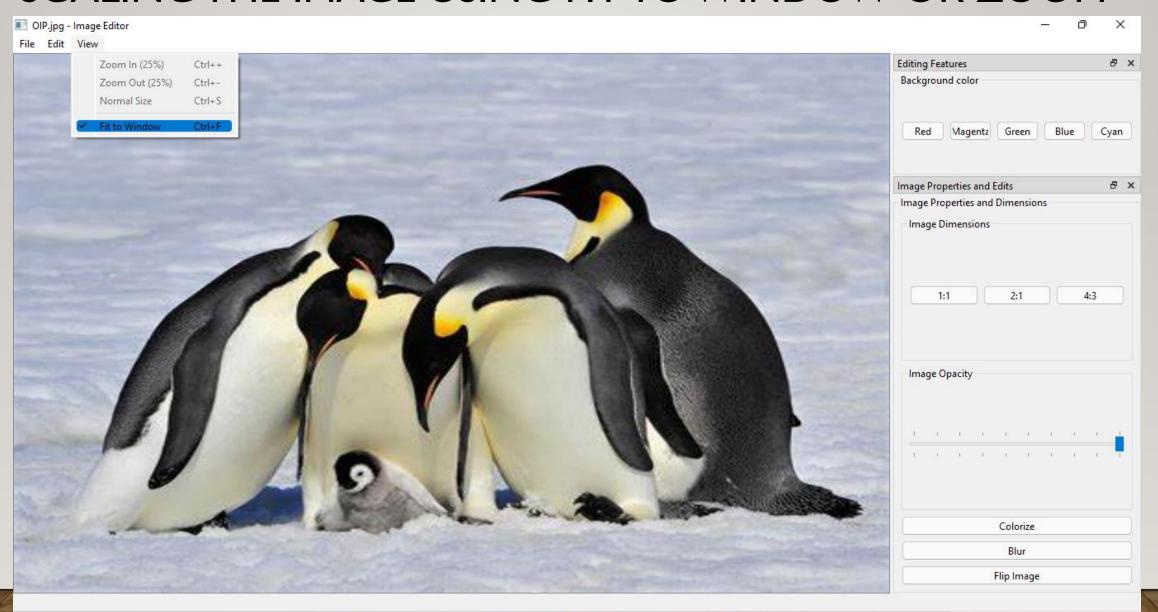
#### OPENING SCREEN OF THE APPLICATION



#### APPLICATION AFTER UPLOADING AN IMAGE



# SCALING THE IMAGE USING FIT TO WINDOW OR ZOOM





















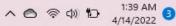




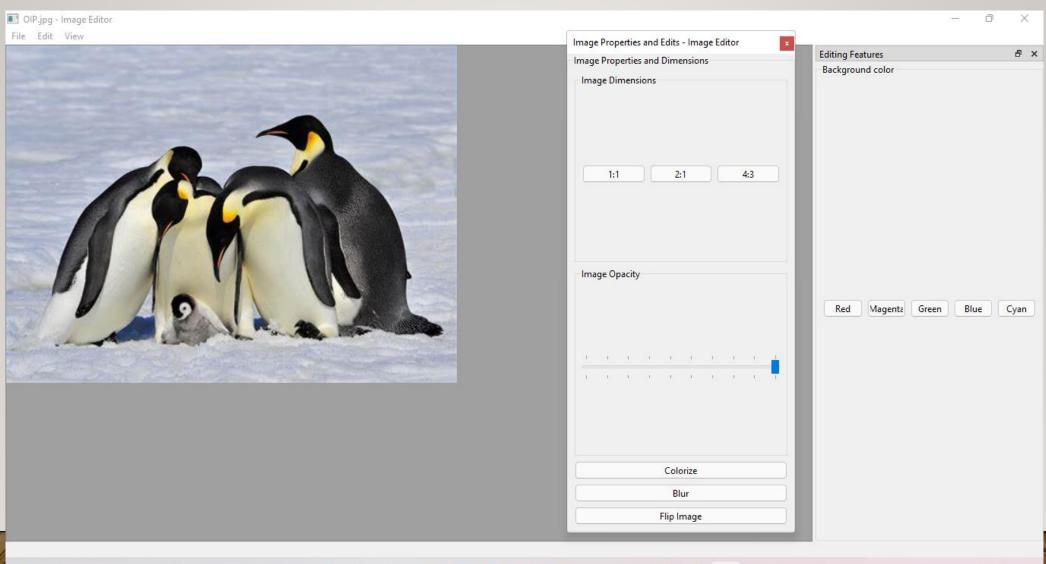








#### MOVING EDITING FEATURE TABS



















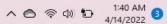




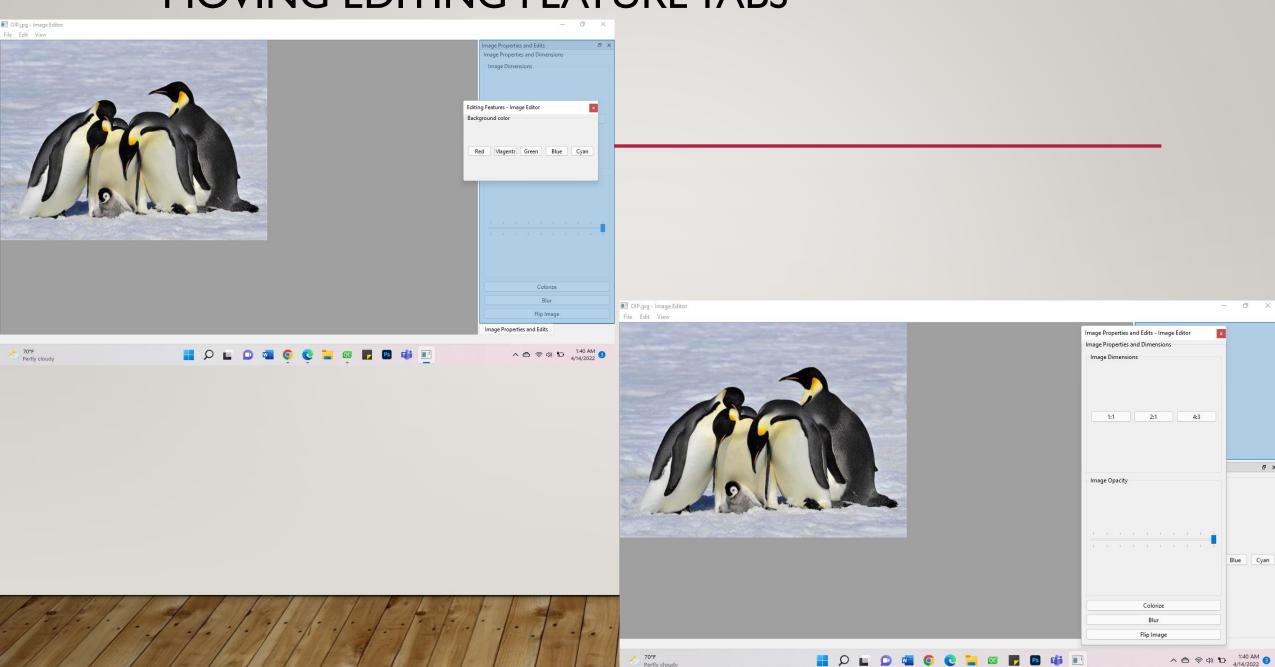




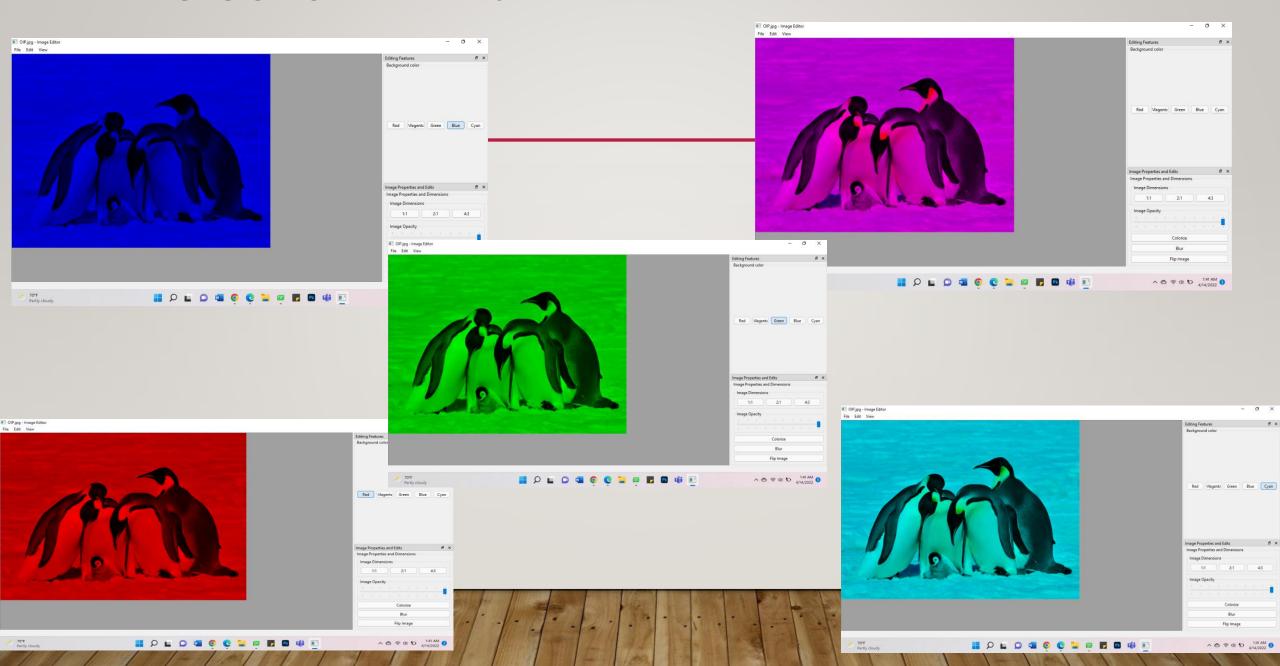




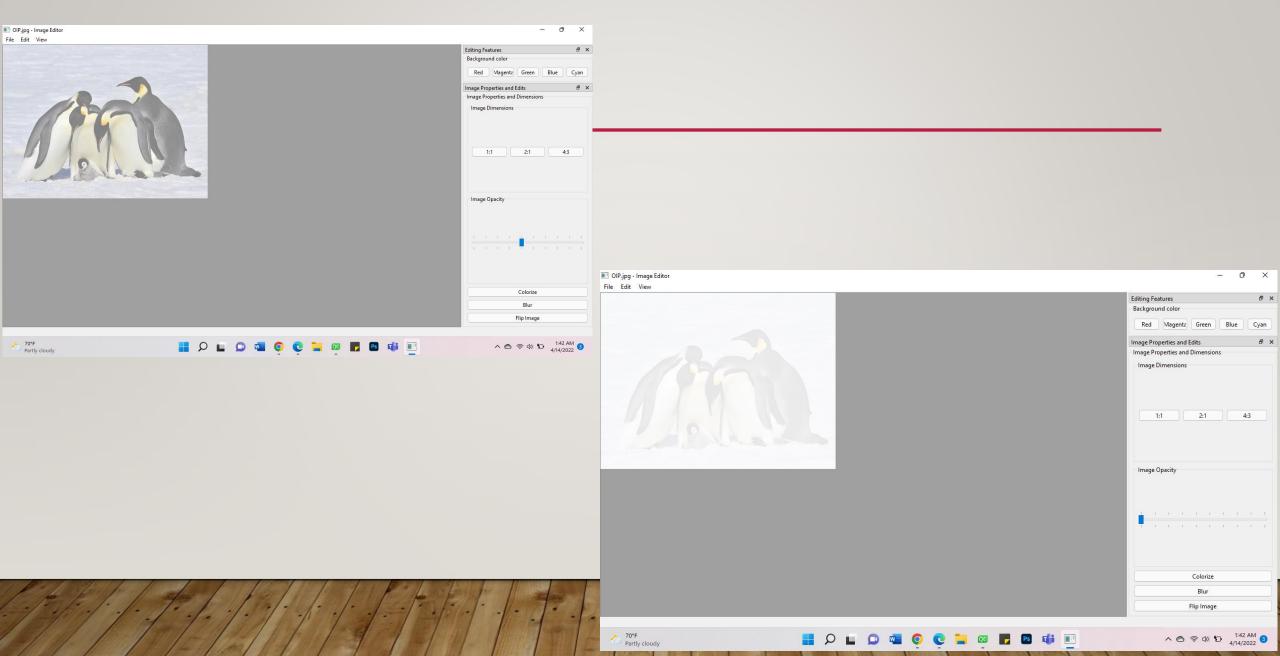
# MOVING EDITING FEATURE TABS



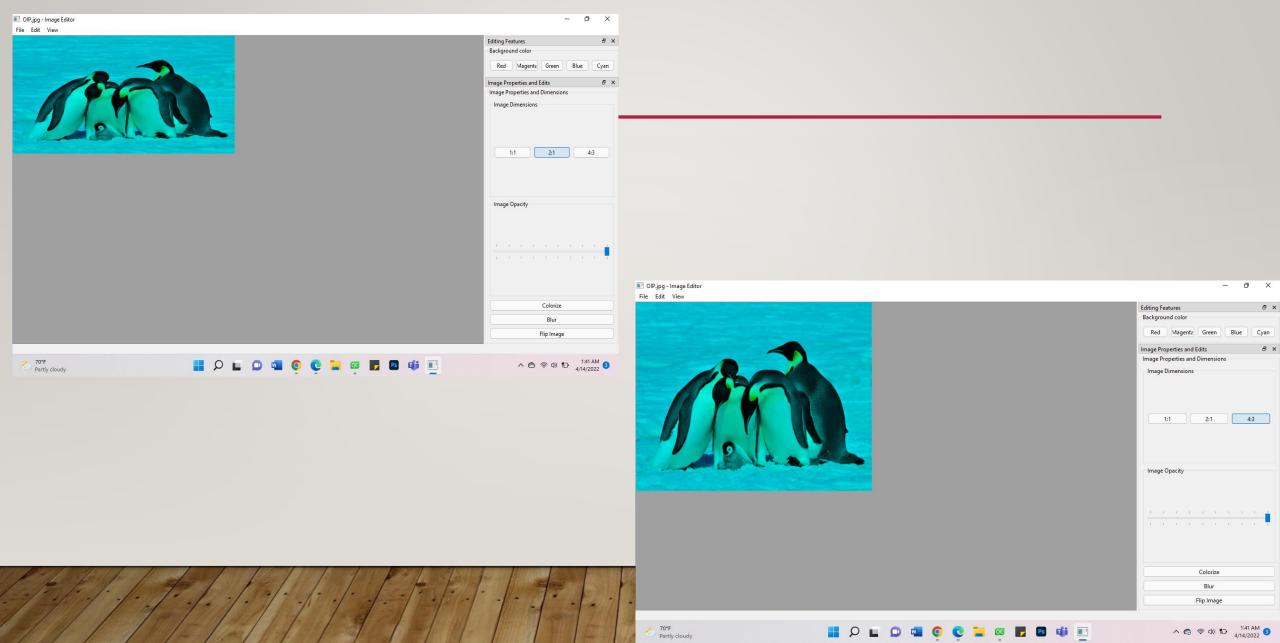
#### ADDING COLOR FILTERS



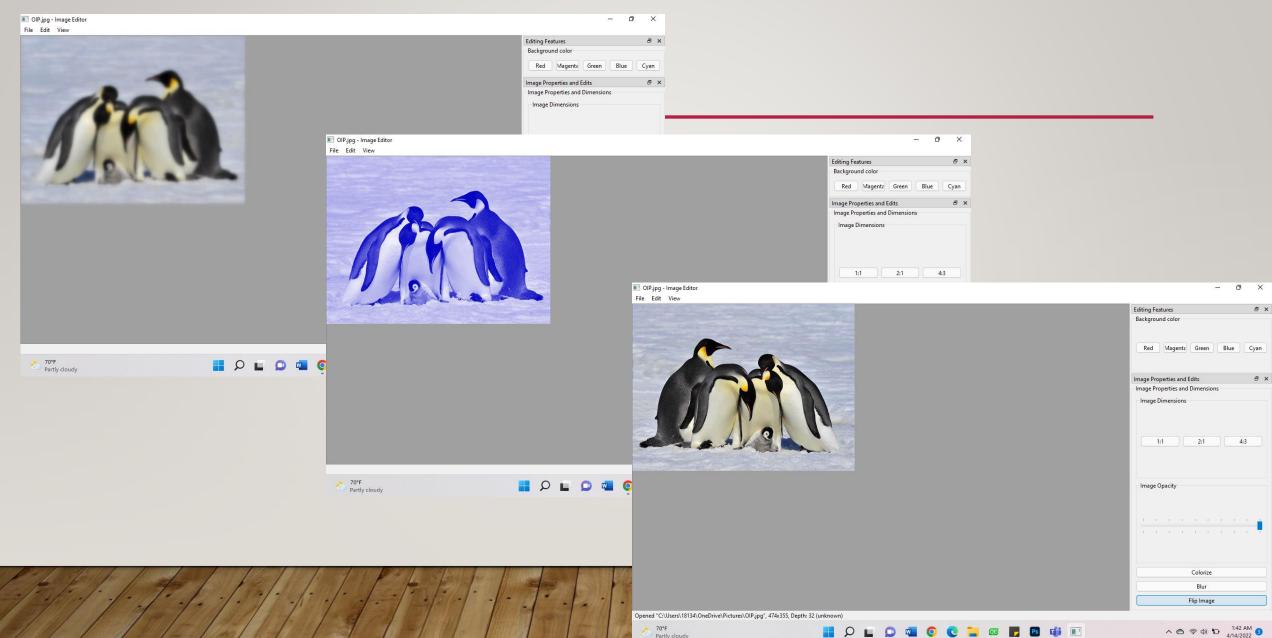
# CHANGING THE OPACITY



# SCALING THE IMAGE WITH RATIO DIMENSIONS



# **EDITING OTHER IMAGE PROPERTIES**



#### SAVING THE IMAGE TO FILES

































# SUCCESSFULLY SAVED IMAGE

