```
[4.0K] asl_gremlin_msgs
   [6.8K]
             CMakeLists.txt
     [4.0K]
             include
       - [4.0K] asl_gremlin_msgs
            msg
    [4.0K]
            36] MotorAngVel.msg
           381
                 MotorPwm.msg
          145]
                 RefTraj.msg
           48] VehicleState.msg
   [2.5K]
           package.xml
   [4.0K]
             src
   OK] asl_gremlin_pkg
[6.8K] CMakeLists.txt
[4.0K] config
[4.0K]
      — [ 864] rover_parameters.yaml
— [ 664] topic_names.yaml
    [4.0K] include
        [4.0K] asl_gremlin_pkg
           - [1.6K] GetParam.h
           - [1.7K]
                     SubscribeTopic.h
    [4.0K]
             launch
          478]
                 launch_asl_gremlin.launch
         [1.0K]
                  launch_asl_gremlin_pkg.launch
         [ 507]
                  launch mavros rosserial.launch
        [ 339]
                 load params.launch
    [2.3K] package.xml
    [4.0K]
             scripts
    [4.1K] plot_bag_file.py
[4.0K] src
        [4.0K] asl_gremlin_pkg
[678] GetParam.cpp
[44] SubscribeTopic.cpp
[2.4K] initiate_rosbag_node.cpp
       bash scripts
[4.0K]
       41] APM_arm.sh
       441
             APM disarm.sh
     696]
            launch_asl_gremlin.sh
            launch_asl_gremlin_split.sh
record_sim_data.sh
select_feedback.sh
    [1.2K]
    [ 670]
    [1.3K]
      7771
             set_controller_gains.sh
    [2.0K]
             set_waypoints.sh
    [ 308]
            start_sim.sh
      429]
             stop_sim.sh
       98] this_robot_name.sh
[2.0K] CMakeLists.txt
[4.0K] controller
    [4.0K] cfg
      [ 733] controllerGainSet.cfg
    [7.9K] CMakeLists.txt
    [4.0K]
             include
         [4.0K] controller
           - [6.7K]
                     BackSteppingController.h
            [ 929]
                     ControllerBase.h
           - [1.4K]
                      controller_utilities.h
           - [1.1K]
                     OmegaToPWM.h
    [4.0K] launch
        [ 636] launch_controller.launch
    [2.7K] package.xml
    [4.0K]
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       - [1.5K]
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         [3.1K]
                 backstepping controller node.cpp
        [2.5K] cmd_pwm_to_arduino_pwm.cpp
[4.0K] controller
           - [ 47] BackSteppingController.cpp
                39]
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        [4.6K]
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        LICENSE
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        README.md
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    [4.0K] cfg
[797] feedbackSelect.cfg
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            [1.8K] EncoderDataToOmega.h
           - [5.4K]
- [1.3K]
                     FeedbackSelected.h
                      ForwardEuler.h
           - [1.5K]
                     Gps2xy.h
    [4.0K] launch
       [ 955] launch_state_feedback.launch
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    [4.0K]
             src
        [2.7K]
                 encoder_data_stamped.cpp
                 encoder_data_to_omega.cpp
encoder to pose.cpp
         [2.6K]
       - [4.9K]
       - [2.0K]
                 feedbackSelect client.cpp
      - [1.1K]
                 feedback_selected.cpp
```

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- [3.1K] gps_to_pose.cpp
         [4.0K]
                 state_feedback
            [4.0K] EncoderDataToOmega.cpp
             [ 45]
                     FeedbackSelected.cpp
                40]
                     ForwardEuler.cpp
           - [2.9K] Gps2xy.cpp
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          601]
                 test_controller.launch
          350]
                 test_encoder_to_omega.launch
          355]
                 test_encoder_to_pose.launch
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        [4.0K]
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left_wheel_ang_vel_cmd.pdf
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                   16K]
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                          plot_pose_from_encoder.plt
pose_from_encoder_ticks.pdf
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                          right_wheel_ang_vel_cmd.pdf
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                   15K]
                          right_wheel_pwm_cmd.pdf
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                     reference_trajectory.txt
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test_forward_euler.cpp
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        [1.5K]
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        [2.4K]
        [1.5K]
                 test_prvt_namespace.cpp
                 test_publish_compass_hdg.cpp
test_publish_encoder_ticks.cpp
test_publish_feedback_selected.cpp
         [ 994]
         [1.8K]
        [1.4K]
                 test_publish_ref_traj.cpp
test_SubscribeTopic.cpp
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         [779]
        [1.2K]
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        trajectory_generation
    [4.0K] cfg
        [1.1K] waypointSet.cfg
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             [5.8K]
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           - [1020]
             [1.5K]
                      TrajectorySwitcher.h
             [1.6K]
                     WaypointSubscribe.h
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                track_other_rover.cpp
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                54]
                     CircularTrajectory.cpp
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                     MinimumJerkTrajectory.cpp
                501
                     TrajectoryBase.cpp
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                 trajectory_generator_with_turning_node.cpp
        [7.4K]
        [6.1K]
                waypointSet_client.cpp
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        tree_view.pdf
[4.0K]
        utility_pkg
  – [6.8K] CMakeLists.txt
    [4.0K]
            include
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           [1.0K] CmdArgParser.h
           [2.8K] custom algorithms.h
```

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[853] custom_type_traits.h
[2.1K] str_manip.h
[2.3K] tinyexpr.h
[891] utilities.h
[6.5K] vector_arithmetic.h
[2.2K] package.xml
[4.0K] src
[4.0K] utility_pkg
[2.4K] CmdArgParser.cpp
[42] custom_algorithms.cpp
[34] str_manip.cpp
[20K] tinyexpr.c
[2.2K] utilities.cpp
```

48 directories, 145 files