```
[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
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    OK] asl_gremlin_pkg
[6.8K] CMakeLists.txt
[4.0K] config
[4.0K]
      - [ 705] rover_parameters.yaml
- [ 664] topic_names.yaml
    [4.0K] include
         [4.0K] asl_gremlin_pkg
            - [1.6K] GetParam.h
             [1.6K]
                     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
[2.2K] initiate_rosbag_node.cpp
        bash scripts
[4.0K]
       41] APM_arm.sh
       441
             APM disarm.sh
      687]
             launch_asl_gremlin.sh
             launch_asl_gremlin_split.sh
record_sim_data.sh
select_feedback.sh
    [1.1K]
    [ 477]
    [1.1K]
     [ 607]
             set_controller_gains.sh
    [1.8K]
             set_waypoints.sh
    [ 84] start_sim.sh
[ 174] stop_sim.sh
[2.0K] CMakeLists.txt
[4.0K] controller
        controller
    [4.0K] cfg
[ 733] controllerGainSet.cfg
    [7.9K] CMakeLists.txt
    [4.0K] include
         [4.0K] controller
           [6.6K] BackSteppingController.h
           — į́ 929]
                      ControllerBase.h
            - [1.4K]
                      controller utilities.h
           - [8.1K]
                      hdg_correct_final_v2.txt
            - [1.1K]
                      OmegaToPWM.h
    [4.0K] launch
         [ 636] launch_controller.launch
    [2.7K] package.xml
     [4.0K]
             src
       - [1.5K]
                  angular_vel_to_pwm_node.cpp
         [3.1K]
                 backstepping controller node.cpp
         [2.5K] cmd_pwm_to_arduino_pwm.cpp
[4.0K] controller
            - [ 47] BackSteppingController.cpp
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                     ControllerBase.cpp
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                 controllerGainSet client.cpp
        LICENSE
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        state_feedback
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[797] feedbackSelect.cfg
    [8.3K] CMakeLists.txt
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             [1.8K] EncoderDataToOmega.h
           - [5.1K]
                      FeedbackSelected.h
             [1.3K]
                      ForwardEuler.h
            - [1.5K]
                      Gps2xy.h
    [4.0K] launch
       [ 955] launch_state_feedback.launch
    [2.8K] package.xml
    [4.0K]
             src
         [2.7K]
                  encoder_data_stamped.cpp
                  encoder_data_to_omega.cpp
encoder to pose.cpp
         [2.6K]
       - [5.0K]
       - [1.8K]
                  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]
[ 40]
                     FeedbackSelected.cpp
                      ForwardEuler.cpp
           - [2.9K] Gps2xy.cpp
        test_asl_gremlin
[4.0K]
    [9.3K] CMakeLists.txt
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             include
        [4.0K] test asl gremlin
    [4.0K]
            launch
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                 test_controller.launch
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                  test_encoder_to_omega.launch
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                 test encoder to pose.launch
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                 cpp_output_data
4K] cmd_ang_vel.dat
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                      converted encoder to omega.dat
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         [2.4K1
                  \texttt{test\_polynomial\_evaluation.cpp}
         [1.5K]
                  test_prvt_namespace.cpp
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                  test_publish_compass_hdg.cpp
                 test_publish_encoder_ticks.cpp
test_publish_feedback_selected.cpp
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         [1.3K]
                 test_publish_ref_traj.cpp
        [ 779]
                 test SubscribeTopic.cpp
[4.0K]
       trajectory_generation
      .0K] cfg
- [1.1K] waypointSet.cfg
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             CMakeLists.txt
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             include
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                      WaypointSubscribe.h
    [4.0K]
             launch
        [ 267] launch_trajectory_generation.launch
    [2.7K] package.xm\overline{l}
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             src
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             [2.0K] DistanceToWaypoint.cpp
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                      MinimumJerkTrajectory.cpp
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                      TrajectoryBase.cpp
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             [3.5K] WaypointSubscribe.cpp
        [4.2K] trajectory_generator_node.cpp
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                waypointSet client.cpp
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        tree_view.pdf
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[4.0K]
    [6.8K] CMakeLists.txt
    [4.0K]
             include
         [4.0K] utility_pkg
             [1.0K]
                     CmdArgParser.h
             [2.0K]
                      custom_algorithms.h
             [ 887]
                      custom type traits.h
           – [2.0K] str manip.h
```

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[2.3K] tinyexpr.h
[636] utilities.h
[6.9K] vector_arithmetic.h

[2.2K] package.xml
[4.0K] src
[4.0K] utility_pkg
[2.2K] CmdArgParser.cpp
[4.3] custom_algorithms.cpp
[35] str_manip.cpp
[20K] tinyexpr.c
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