

FindTheDrift

Simulating Drift Car Performance & Racing Analytics

FindTheDrift is a Java-based app project designed to simulate, track, and analyze lap time performance in drift and circuit racing. The goal is to help racers, tuners, and teams optimize their car setups and driving lines for the best results-both in simulation and eventually in real life.

Car: What does FindTheDrift do?

- Simulates drift & circuit lap times with detailed car, part, and track data.
- Compares optimal driving lines (based on simulation) to real user lap times.
- Shows the effect of tuning (suspension, tires, turbo, ECU, etc.) on performance.
- Lets you test the difference between driving with safety systems (ABS, TCS, drift assist, counter-steer) ON vs. OFF.
- Tracks tire wear, temperature, and risk of failure in sim runs.
- Generates leaderboards, rankings, and parts lists per user/test run.
- Integrates every major drift/racing track and car worldwide-like Gran Turismo, but with a unique twist for the tuning and analytics crowd.

Current Features: Current Features

- Garage: Your personal facility to store and test all vehicles you own, with stats and tuning options. Analyze your performance and tuning ratios here.
- Drift Shop: Buy new parts/upgrades using virtual currency earned by winning/top lap times. Shop covers everything from suspension to turbo to transmission and more.
- Car Library: All major drift cars and racing models, ready to be added/tested.
- World Map: Select from all major racetracks globally-Asia, Europe, Americas, and more.
- ECU Settings: Toggle real-world systems like ABS, drift assist, traction control, and more, to test true skill vs. computer-aided driving.
- Braking Zones: Visual green/yellow/red brake zones to simulate braking technique and handbrake use for each corner.
- Performance Tracking: Tire temp, wear, grip-to-weight ratios, lap analysis, and recommendations.
- Leaderboards: Track and compare lap times, upgrades, and driving style.

Planned Updates: Planned Updates

- UI improvements for a more immersive experience
- More realistic physics and performance modeling
- Data import for real-life lap times (future)
- Team and community features (Discord integration, feedback channel, tester recruitment)
- Advanced analytics to suggest setup/driving changes

How to Use/Contribute: How to Use/Contribute

1. Clone or Fork this repo to your machine.
2. Run the Java app (full instructions in /src).
3. Play with the Garage, Shop, and Map-try out new setups and compare results!
4. Feedback, bug reports, and suggestions are welcome-join the Discord or open an issue.

Project Roles Needed: Project Roles Needed

- Java developers (backend, logic, simulation)
- UI/UX designers (desktop/app/web)
- Automotive/racing consultants
- Testers (sim racers, real drivers, car fans)
- Marketing/Community managers

Want to Get Involved: Want to Get Involved?

- Testers/Developers: DM or join the Discord!
- Racing fans: Share your times, setups, and help refine the simulation.
- Feedback: Please open issues or PRs-every bit helps!

Project Status: Project Status

Stage: Early prototype (simulation and basic analytics working; adding more cars, tracks, and tuning depth weekly).

Goal: Reach >92% code functionality and realism before pitching to investors or professional teams.

Links: Links

- GitHub Project Repo
- Discord Community (add your real link)
- Project Journal/Study Guide (add link to your full doc if you want)

Created and managed by: Cullen Louis

North Shore Community College · Aspiring automotive developer & racing analytics specialist