

SuperLap Racing Line Optimization System

EPI-USE



Quintessential

Amber Ann Werner [u21457752]

Milan Kruger [u04948123]

Qwinton Knocklein [u21669849]

Sean van der Merwe [u22583387]

Simon van der Merwe [u04576617]



CONTRIBUTION OF TEAMMATES

Project Manager

Amber Werner

- Documentation
- System Diagrams
- Testing
- Created Website Landing Page
- Convolutional Neural Network (CNN) development
- CNN model updates and corrections
- Organizing meetings
- UI icon design
- Project day promotional materials (posters and banners) and T-shirt designs

Backend Developers

Qwinton Knocklein

- Documentation
- API development (and subsequent upgrades)
- Image Processor Development
- Testing
- UI development
- Centre-line drawing tool and mask creation
- Boundary data corrections from CNN to PSO
- CNN training and testing

Sean van der Merwe

- Documentation

- API and Swager set up
- API upgrades
- Particle Swarm Optimization (Race line Optimization)
- Integration
- Game Integration
- Deployment of System
- CNN training data collection
- CNN training script upgrade
- CNN model upgrade

Front End Developers

Simon van der Merwe

- Documentation
- UI design
- CI/CD (DevOps)
- Integration
- Genetic algorithm and motorcycle physics

Milan Kruger

- Documentation
- UI design
- UI development (and all subsequent upgrades)
- Integration
- API within Unity for integration
- CNN training and testing