

Denis Trailin

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EDUCATION	University of British Columbia , Vancouver, British Columbia Bachelor of Science (B.Sc) in Computer Science	Sep 2014 – May 2019
WORK EXPERIENCE	Argo AI , Remote (Vancouver, British Columbia) <i>Motion Planning - Software Engineer</i> <ul style="list-style-type: none">Joined the remote guidance and trajectory selection team and worked on the C++ motion planning codebase to add the remote guidance features necessary to enable long term driverless operationsCreated detectors that used motion planning trajectories and prediction data to detect and call remote guidance in situations where the autonomous vehicles progress was impeded, like blocking vegetation or an incorrectly labeled emergency vehicleImplemented remote guidance commands to allow remote operators to unblock the vehicle if it is detected to be stuckTriaged remote guidance related trip segment failures and created motion planning recommendations to prevent them Microsoft , Redmond, Washington <i>Azure Service Fabric - Software Engineer</i> <ul style="list-style-type: none">Worked on Service Fabric, a cluster orchestrator used by thousands of services across Microsoft, on the underlying distributed transactional key-value storeImproved the 50th percentile write performance of core disk logging systems by 4xMaintained the C# and C++ implementations of the replicator used in Service Fabric, fixing high impact bugsSupported internal and external teams as an on-call engineer resolving incidents related to cluster and replica management Microsoft , Redmond, Washington <i>Azure Service Fabric - Software Engineering Intern</i> <ul style="list-style-type: none">Increased developer visibility on excessive tracing in Service Fabric, a problem impacting production observabilityBuilt an extendable and configurable tool using C# to run simulated Service Fabric workloads and collect tracing dataCreated tests to detect increases in tracing across builds by measuring statistical deviation from a baseline to detect commits that greatly increased tracing above normal levels Bloomberg LP , New York City, New York <i>Feeds Distribution Infrastructure - Software Engineering Intern</i> <ul style="list-style-type: none">Fixed major point of failure for real time news feeds while keeping the system high performance and backwards compatibleUpdated distributed uniqueness checking server written in C++ to use an arbitrary number of nodes instead of the previous limit of two, greatly improving the resilience of the serviceImplemented dynamic leadership switching and leadership elections to the uniqueness server using Apache Zookeeper Hootsuite , Vancouver, British Columbia <i>Android Team - Co-op Software Developer</i> <ul style="list-style-type: none">Supported transition from Java to Kotlin as the main Android programming languageCollaborated with other team members to push out critical features such as YouTube streams, Publisher approval streams, and re-auth for the core appPublished 2 blog posts for the official Hootsuite engineering blog on unit testing with RxJava ↗ and Kotlin ↗ University of British Columbia , Vancouver, British Columbia <i>Teaching Assistant</i> <ul style="list-style-type: none">Taught and led labs for CPSC 213, Introduction to Computer Systems, a course focused on C and assembly Trace Intelligent Systems , Calgary, Alberta <i>Contractor</i> <ul style="list-style-type: none">Integrated existing open-source object tracking C++ libraries into a common framework for deployment to drones and tripod based camerasRan experiments to analyze the performance and accuracy profiling of computer vision tracking algorithms	Jun 2022 – Nov 2022 Jul 2019 – Jun 2022 Jun 2018 – Aug 2018 May 2017 – Jul 2017 Jan 2016 – Aug 2016 Jan 2017 – Dec 2017 Jul 2015 – Aug 2015
PROJECTS	UBC Sailbot , Vancouver, British Columbia <ul style="list-style-type: none">Worked on autonomous sailboat that broke the record for farthest autonomous crossing of AtlanticBuilt obstacle detection software for thermal cameras using computer vision and machine learning in C++Created microservice for satellite to boat communication in JavaScript using Node.jsStarted design and development on the next generation motion planning code in Python using OMPL	Sep 2015 – May 2019