Kevin(Wenkai) Xu wenkai.xu@mail.utoronto.ca, (647)979-3003, Toronto;

Education

B.A.Sc. in Computer Engineering:

University of Toronto (Sept 2015 – May 2020);

Skill

Computer software:

C/C++, Python, SYCL(oneAPI);

Perl, Assembly, Ruby (on Rail), Tcl, JavaScript;

Digital hardware design:

oneAPI IP authoring, Platform Designer, HLS, System Verilog;

Experience

Compiler Engineer at Intel (May 2022 - present):

Application engineering for the Intel oneAPI for FPGA compiler;

HLD reference designs;

oneAPI IP author;

UAS Software Engineer at Drone Delivery Canada

PEY Co-op(May 2018 August 2019) FT(May 2020 – May 2022):

Onboard flight control and diagnostic system development;

Computer vision-based landing aid system development;

Fix-wing UAS lead at University of Toronto Aerospace Team (Sept 2015 – Apr 2019):

Design and integration of Fix-wing Unmanned Aerial System;

Imagine payload system development;

3D Printing Engineer at U of T Entrepreneurship Hatchery (Jan 2017 – May 2018):

Helping start-ups with prototyping;

Project

CSL MapViewer:

Generating an interactive map for the popular game Cities: Skyline;

This takes the city user builds in-game and generates an off-game map to be shared with other players.

Survivor:

A “Cheat” for the popular web-based game Surviv.io;

The program uses YOLOv5 to recognize players and obstacles onscreen and

calculate the optimum firing solution (using auto click) based on players' location, speed and obstacles in between;

Open Cycle:

Microcontroller-based open-source cycling computer;
Using ESP32 systems supporting sensors like BLE speedometer and GPS.

Active Dataset:

Computer vision data labelling program with a focus on active learning;
It provides basic class labelling and also allows quick screening and modifying existing labels (that might be auto-generated) with many automatic label quality checkers;
With a "Task" system to streamline the workflow of labelling so that a large labelling task can be broken down into sessions and clients to distribute the workload.

Geographic Information System (GIS):

Geographic Information System based on OSM database in C++,
with a graphical user interface and the capability of
solving pathfinding and travelling currier problems;

University of Toronto Explorer 2B (UTX-2B):

Primary fix wing UAS for the University of Toronto Aerospace Team;
Equipped with automatic flight controller, machine vision payload
System and long-range communication systems;

More

LinkedIn: goo.gl/P4uqny
GitHub: github.com/KevinUTAT
Online CV: kevinutat.github.io/
GIS Project demo: youtu.be/L7z_F1HgqtQ