

# John Litborn

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## Experience

### Education Group for Programming and Programming Didactics

Linköping University

*Amanuensis, Course Assistant, Head Assistant*

2013 – 2017

- Led lessons and lab sessions, advised on projects, and graded hand-ins and exams
- Taught introductory courses in Python, C++, Ada, and Matlab, and advanced courses in C++ STL, Git, Object-Oriented programming and unit testing
- Performed light administrative and managerial duties for students and other assistants
- Improved tooling and workflow used by assistants

### Division for Artificial Intelligence & Integrated Computer Systems

Linköping University

*Course Developer, Software Developer*

Summer of 2014 & 2015

[https://github.com/h00701350103/XPilot-AI\\_LiU\\_fork](https://github.com/h00701350103/XPilot-AI_LiU_fork)

Python, C, HTML

- Overhauled assignments, improved instructions, and documentation
- Added features and fixed bugs in the interfaces between the C game client, the injection code used to run a game client automatically, and the Python API used by students
- Changed server-client netcode to send extra data, offloading and improving the client-side AI API

### Ericsson, HiQ

Linköping

*IT Consultant*

Mar – Oct 2017

- Updated 4G base-station unit tests written in Erlang to work in a virtualized environment
  - Supported team members with core Linux and Git skills
  - Wrote automation scripts in Python & shell
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## Education

### Linköping University, Faculty of Science and Engineering

2012 – 2014, 2020 – 2021

*Computer Engineering*

120 Credits

- 80 credits in programming: courses in a diverse set of languages with a focus on algorithm construction, optimization, low-level code and hardware.
  - 40 credits in math courses.
  - Programming competition winner (2013): sorting algorithm in microcode for a low-level simulated computer. Solution beat the previous student record and professor's record.
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## Personal Project Highlights

### Necro Score Bot

2015 – present

[https://github.com/h00701350103/necro\\_score\\_bot](https://github.com/h00701350103/necro_score_bot)

Python, 1500 lines of code

- Pulls leaderboard updates from the Steam API for the indie rhythm roguelike game Crypt of the Necrodancer, posting notable scores to Twitter and/or Discord
- Tags players and detects cheated or bugged scores, notifying the developers
- Has thorough error handling, a config file and command-line flags, and is modular and multithreaded

### Seat Exchange Bot

May – June 2019

[https://github.com/h00701350103/seat\\_exchange](https://github.com/h00701350103/seat_exchange)

Python, 3500 lines of code

- Implements an adaptation of a game from a Korean game show, The Genius
  - Supports 40 different commands, varying player counts, bot players, simultaneous games, and permissions
  - Adheres to PEP coding standards and is Object-Oriented, modular, and statically typed
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## Core Technical Skills

**Languages:** Python, C++, C, Ada, Shell scripting

**Tools:** Arch Linux, NeoVim, Git, command line tools (gdb, pdb, mypy, linters)