

John Litborn

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Experience

- **Education group for Programming and Programming Didactics** **Linköping University**
2013 – 2017
Amanuensis, Course Assistant, Head Assistant
 - Taught introductory courses in Python, C++, Ada and Matlab.
 - Held lessons, lab sessions, and graded hand-ins and exams.
 - Held advanced courses teaching the C++ standard library, Git, OO programming and unit-testing.
 - Advisor on projects, grading documentation and hand-ins.
 - Light administrative and managerial duties for students and other assistants.
 - Improved tooling and workflow used by tutors.
 - **Division for Artificial Intelligence & Integrated Computer Systems** **Linköping University**
Summer of 2014 & 2015
Python, C, HTML
Course Developer, Software Developer
https://github.com/h00701350103/XPilot-AI_LiU_fork
 - 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**
Mar – Oct 2017
IT-Consultant
 - Updated 4G base-station unit tests written in Erlang to work in a virtualized environment.
 - Supported team members with core Linux and Git skills, and wrote automation scripts in python & shell.
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Education

- **Linköping University, Faculty of Science and Engineering** 2012 – 2014, 2020 – 2021
120 Credits
Computer Engineering
 - 2/3 of credits are in programming in a diverse set of languages, with a focus on algorithm construction, optimization, low-level code and hardware. 1/3 of credits in math courses.
 - My 2nd year I won a programming competition in a course, writing a sorting algorithm in microcode for a low-level simulated computer. My solution beat the professors record, outclassing the student record.
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Core Technical Skills

Primary languages: Python, C++, C, Ada

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

Highlighted Personal Projects

- **Necro Score Bot** 2015-present
https://github.com/h00701350103/necro_score_bot Python, 1500 lines of code
 - Pulls leaderboard updates from the Steam API for the indie rhythm roguelike Crypt of the Necrodancer, posting notable updates to Twitter and/or Discord.
 - Tags players and detects cheated or bugged scores, notifying the developers.
 - Modular, multithreaded, thorough error handling, config file and command line flags.
- **Seat Exchange Bot** May-June 2019
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.
 - Object-oriented, modular, statically typed, adheres to official python coding standards and commented.