

John Litborn

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Experience

Education Group for Programming and Programming Didactics

Linköping University

Amanuensis, Course Assistant, Head Assistant

2013–17

- 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 the 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/jakkd1/XPilot-AI-LiU_fork

Python, C, HTML

- Overhauled assignments and 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 core Linux and Git skills for other team members
 - Wrote automation scripts in Python & shell
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Education

Linköping University, Faculty of Science and Engineering

2012–14, 2020–21

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
 - Won a 2013 programming competition in a course to implement a sorting algorithm in microcode for a low-level simulated computer, beating the previous student record and the professor's record.
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Personal Project Highlights

Necro Score Bot

2015–present

https://github.com/jakkd1/necro_score_bot

Python, 1500 lines of code

- Pulls leaderboard updates from the Steam API for the indie roguelike rhythm 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, has a config file and command-line flags, and is modular and multithreaded

Seat Exchange Bot

May–June 2019

https://github.com/jakkd1/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)