John Litborn

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Experience

- **Education group for Programming and Programming Didactics** **Linköping University**
  Department of Computer and Information Science
  Amanuensis, Course Assistant *2013 – 2017*
  - Recruited my second year at university, I taught courses in Python, C++, Ada and Matlab.
  - Primarily introductory courses, where I held lessons with repetition and shared problem solving, lab assistant where I answered questions and helped solve problems, and correcting lab hand-ins and exams.
  - Later on I also held more advanced courses, teaching the C++standard library, git, object-oriented programming or unit-testing. I was also advisor on projects and grading documentation and hand-ins, and as head assistant taking on light administrative and managerial duties.
- **Division for Artificial Intelligence & Integrated Computer Systems** **Linköping University**
  Department of Computer and Information Science
  Course Developer, Software Developer *Summer of 2014 & 2015*
  - After being unhappy with a course and it's software and bringing it up to the professor, I was offered a summer job to improve it. Where I remade the assignments and improved the Python API for XPilot, a 2D multiplayer space shooter, that was used in the course.
  - Using what I had learned in my teaching and my experience from the course I overhauled the structure of the assignments, changed, removed and added several ones and wrote better and clearer instructions and documentation, most of it in HTML.
  - The XPilot-AI API in use was developed at Connecticut College, and after discussions with them I forked the project and begun modifying it to fix bugs and add features to suit our needs.
  - My second year working on it I also started modifying the XPilot source code, written in C with heavy use of macros, and modified its network protocol to send more data so the client-side API for example didn't have to re-calculate the speed of objects.
  - Source Code: `https://github.com/h00701350103/XPilot-AI_LiU_fork`
- **Ericsson, HiQ** **Linköping**
  IT-Consultant *2017*
  - Updated 4G base-station unit tests written in Erlang to work in a virtualized environment. I was the git-master in my team, and helped the other team members when they encountered problems with Git or Linux.
  - I was also responsible for updating our sections on the internal Wiki, and wrote python and bash scripts to simplify rote tasks.

Education

- **Linköping University**
  Faculty of Science and Engineering, Computer Engineering *2012 – 2014, 2020-2021*
  - Finished courses worth 120 credits, equivalent to 4 semesters of full-time studies.
  - I have almost exclusively studied part-time though, early on because of parallel work at the university, later on because of mental health issues.
  - My second year I won a programming competition in a course on Computer Hardware and Architecture, which consisted of writing a sorting algorithm in microcode for a low-level simulated computer. My solution also beat the professors best implementation, and outclassed the previous student record.

Core Technical Skills

Languages: Python, C, C++, Ada
Tools: Arch Linux, NeoVim, git, GNU Debugger, Python Debugger (pdb), mypy

Personal Projects

- **Crypt of the Necrodancer**
  Faculty of Science and Engineering, Computer Engineering *2012 – 2014, 2020-2021*
  - Finished courses worth 120 credits, equivalent to 4 semesters of full-time studies.
- **necro_score_bot**
  Faculty of Science and Engineering, Computer Engineering *2012 – 2014, 2020-2021*
  - Finished courses worth 120 credits, equivalent to 4 semesters of full-time studies.
- **Seat Exchange Bot**
  Faculty of Science and Engineering, Computer Engineering *2012 – 2014, 2020-2021*
  - Finished courses worth 120 credits, equivalent to 4 semesters of full-time studies.
- **Home Automation**
  Faculty of Science and Engineering, Computer Engineering *2012 – 2014, 2020-2021*
  - Finished courses worth 120 credits, equivalent to 4 semesters of full-time studies.