

Henrik Siljebråt

#neuroscience #videogames #ledzeppelin

EDUCATIONAL MILESTONES

My interest for the human mind began when I was a teenager and became fascinated with dreams, especially lucid dreaming. I intended to learn more through the combination of mathematics and natural science at Lund Institute of Technology, but realized a more holistic view of the brain was the better approach. My technical background and work experience in IT/DevOps has provided solid ground throughout my later studies in Psychology and Cognitive Science, leading to my current focus in cognitive modelling of animal learning and decision making.

Goldsmiths, University of London, United Kingdom *PhD in Computer Science/Psychology*

SEPTEMBER 2016 - ONGOING

Based on established neurobiological correlates of reinforcement learning (RL), I investigate animal learning and decision making using cognitive modeling techniques, such as probabilistic programming and machine learning. Animals somehow manage to create useful representations of incoming sensory information, representations then used for learning and decision making. How these representations of states of the world are integrated into task structure and models of the world is an open question, which I investigate using behavioural experiments with humans and bumblebees and modelling said behaviour using RL combined with hidden state models for representing states and task structure. The potential findings of these experiments have promise to not only elucidate the workings of the animal brain but also provide valuable contributions to artificial intelligence, where improved models of state representations could vastly improve data efficiency and generalizability over current generation systems.

Lund University, Sweden — Master in Cognitive Science

SEPTEMBER 2013 - SEPTEMBER 2015

Really fun and engaging program that included courses in animal cognition, interaction design, robotics and the philosophy of mind. One notably valuable experience was working in a team with engineering students to program the behavior of a robot to mimic human gaze behavior. For my thesis, I learned the basics of Python and reinforcement learning by creating an AI agent that picked flowers in Minecraft. I also investigated the neurobiological basis for the methods used. A full description of the program can be found at <http://www.lucs.lu.se/education/>

PUBLICATIONS

Towards human-like artificial intelligence using StarCraft II (2018, FDG Conference)

<http://bit.ly/2FTEWRb>

MAIA: The role of innate behaviors when picking flowers in Minecraft with Q-learning (2015, master thesis)

<http://bit.ly/2WLBi8x>

Hur tittar människor? (in Intelligent, socially oriented technology II, 2015)

<http://bit.ly/2I8rPEe>

Binding av Attribut till Olika Objekttyper i det Episodiska Minnet (2009, bachelor thesis)

<http://bit.ly/2YIUrd2>

TALKS

Towards human-like artificial intelligence using StarCraft II (2018, IGGI Conference)

<http://bit.ly/2TSfaHs>

Society Divided - The Gamification of Democracy (2018, Overcoming the Cultural Impasse Conference)

<http://bit.ly/2YG9sMt>

Seeing red: Picking flowers in Minecraft with Q-learning (2015, SWECOG conference)

<http://bit.ly/2TQI77O>

RECENT JOB EXPERIENCE

Goldsmiths, University of London, United Kingdom — *Teaching assistant*

I find teaching a very valuable experience, as I have to explain concepts differently depending on students' knowledge level and idiosyncratic ways of thinking. This makes me see code in new ways that can be helpful in my own work.

OCTOBER 2017 - MARCH 2018

Provided student support during weekly two-hour lab sessions for the module Introduction to Programming. Students used p5js, a JavaScript library well suited for creative coding such as visualisations and games.

AUGUST 2019 & DECEMBER 2019

Worked as a teaching assistant in week-long introduction courses to Python in August and December.

International Motors Nordic AB, Malmö — *IT consultant for Head of IT*

MARCH 2016 - AUGUST 2016

Formally employed by Dfind IT, I was a full time consultant for the Nordic section of the U.K. company International Motors, resellers of cars such as Subaru and Isuzu. My role included doing all parts of IT; from researching new business systems for the CFO, to server configuration and maintenance, programming new software and client support. The company itself was around a hundred people, spread over Finland, Baltikum, Denmark so I got the chance to see and talk directly to people in different parts of the company like warehouse, accounting, sales, and repairs which gave me new insight into the different departments of a business.

The Code Bureau, Lund — *Sysadmin/DevOps*

SEPTEMBER 2015 - JANUARY 2016

Part-time internship at a web development start up. Using the knowledge gained at Atea, I could explore my interest for Linux to set up servers and development tools. This mainly involved deploying Node.js web sites with nginx, cross-platform development tools with Docker, setup and maintenance of Gitlab and server and service monitoring with Prometheus and Grafana.

Atea Sverige AB, Malmö — *1st Line Support/Technical Analyst*

SEPTEMBER 2011 - JANUARY 2015

Helpdesk support via email and telephone with AD administration and troubleshooting in Windows XP and 7. Also some SAP, LDAP and UGM administration. I mainly supported E.ON, which gave me valuable insight of the IT infrastructure at a multinational company. The workload was sometimes very high, so this work taught me efficiency and stress management.

GITHUB

<https://github.com/fohria>

LANGUAGES

Swedish (native)
English (110/120 on TOEFL)
Python
JavaScript

CERTIFICATES

ITIL Foundation
Microsoft MCSA:
Configuring Windows 7
Microsoft MCSA: Enterprise
Desktop Support Technician