


# Erik Ihrén

**Location:** Stockholm, Sweden.  **GitHub:** @Siretu  
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## EDUCATION

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**Bachelor's Degree** **Royal Institute of Technology, Sweden**  
Computer Science Expected graduation: October 2015  
Major GPA: 3.92  
Teaching Assistant, August 2014 - December 2014

## WORK EXPERIENCE

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**Spotify** Software Developer, Sweden, June 2015 - August 2015

- Created a new message hub for Spotify's data infrastructure, handling billions of messages per hour using Crunch and Hadoop.
- Reduced execution time per hour by 85%, taking down the average time of one run from 1.5 hours to 15 minutes.

**Ericsson** Software Developer, Sweden, June 2014 - December 2014

- Wrote Python scripts to automatically extract dependencies between the huge number of Ericsson projects.
- This removed the need to rebuild and test everything for every commit, which greatly increased performance in their continuous integration environment.

**Domain Name Services** Summer Intern, South Africa, May 2013 - August 2013

- Implemented an asset registry system in their Django admin interface.
- Worked on automating several administrative applications and scripts.
- Attended the ICANN and AFRINIC conferences.

**Netnod** Summer Intern, Sweden, June 2011 - August 2011 and June 2012 - August 2012

- Extended Django's admin interface to pull arbitrary data from models.
- Used the Javascript library Flot to visualize the data compared to other models.

## PROJECTS

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Full portfolio can be found on my personal site: <http://www.nada.kth.se/~eihren/>

**Home Automation** Implemented voice control and automation for various things in my apartment.

- Voice controls allows me to play music and control lights and music volume.
- Surveillance system emails me if it detects movement when I'm not home.
- Reminder system allows my server to notify me of upcoming events.

**Cruiser Command** Spent three years continuously developing my own mod for Starcraft 2, played by thousands.

- Average rating of over 4.8/5 out of over 2000 reviews.
- Implementing advanced AI for a complex team-based strategy game.
- Working and fixing bugs in a code base with over 25,000 lines of my own custom code.

**Kartobot** Built and programmed a mapping robot with two friends. Uses two rotating ultrasonic sensors to draw a realtime map of surrounding area.

- Implemented A\* pathfinding algorithm in C
- Optimized algorithm for extreme memory constraints (10kB)
- Modified algorithm to use binary heaps to increase performance with 100x.

## COMPUTER SKILLS

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**Languages** I'm experienced with Python, Java, C# and C/C++. I'm also familiar with a great deal of other languages like Lisp, Go, Haskell, Prolog, Ruby, Swift and Javascript.

**Tools/Frameworks** I have experience with following tools and frameworks: Git, CAD, Django, MySQL, HTML/CSS, Bootstrap, AngularJS, Docker, Hadoop, Crunch and LaTeX.

## PRIZES AND AWARDS

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- Finalist in Swedish national programming competition at high school level.
- First place in Linköping University's case competition 2011.
- Second place in Spotify's Hockey Programming Challenge.