Joakim Uddholm

Personal Data

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Summary

I am a recently graduated Master in Computer Science who studied at the Royal Institute of Technology in Stockholm, Sweden. My focus was on computer security. Since the age of 17, I've also worked part time as a professional programmer. Mostly I've worked a lot with web development, but I've also dabbled with scraping and some mobile app development. The past few years I've also focused on security. I've performed some minor penetration tests, as well as contributed by finding and disclosing security vulnerabilities to different companies.

I am confident in my ability as a software engineer, backed by a combination of theoretical and practical experience from having studied and worked at the same time. My keen interest in the subject will ensure that I always keep learning.

Work Experience

Current May 2019	**Security Engineer - Infrastructure at N26 GmbH** *Bank startup* As part of the infrastructure security team my task was to build security tooling to help defend the organization. Implemented a Cloud Auditing tool. Worked on implementing a Vulnerability Management Process and implemented different automated scanners. Audited existing infrastructure and code for vulnerabilities. Wrote remediation plans to help developers fix found vulnerabilities. Worked with and helped build parts of the SIEM system. Improved the existing processes and documentation around PKI. Helped teams securely generate and store new TLS/SSL keypairs.
July 2017 - May 2019	**Software Engineer at Wellnow GmbH** *Berlin based startup* Tasked with maintaining and developing new features for the Wellnow platform as the company rapidly grows. Polyglot development in a modern microservice infrastructure. As a full stack developer in a small team I got to interact with most parts of the system and infrastructure. I handled most of the backend APIs and server infrastructure of the company. Specific projects: geospatial querying using postgis, Microservice Orchestration and CI/CD rewrite using Hashicorp products, cache for fast availability querying, deployment service, application and infrastructure logging via ELK stack, complete onboarding and offboarding from a legacy system to a new. Technology bingo: Docker, Consul, Nomad, Terraform, Packer, Vault, AWS, Serverless, Typescript, Expo, GraphQL, MySQL, Redis, React, NodeJS, Python, Golang, Scala, Rust, Elasticsearch.
Jan 2015 - July 2017	**Self-Employed at Blacknode** *Programming and Penetration Testing* I performed penetration testing focused on Network-, Application-, and Web Security, as well as took on more specialized programming projects. I reverse engineered an Android application and assessed store-networks for vulnerabilities for a major retail company (100+ stores). I built and ran multiple web-scrapers with infrastructure for a major Scandinavian retail chain to gather information about competitors' products and prices.
May-Oct 2015	**Part-time Security Consultant and Programmer at Bambora** *Mobile Payment Company* Short term hire after finding vulnerabilities in the mobile payment platform delivered by Bambora. Performed penetration tests and prototyped new features to improve security at the mobile division of Bambora. Added encryption for locally stored user credentials to better secure the user data stored on a phone against e.g. theft. Prototyped platform-authentication for clients using BankID. Focused on web and mobile security. Android and Python development.
Aug 2013 - May 2015	**Part-time Security Consultant and Programmer at Payson AB** *Online Payment Platform* Tasked with finding vulnerabilities in Payson's systems. Programming frontend and back-end in C# .NET. In addition to helping out with new functionality on the website, I had my own project involving web scraping and regularily data mining thousands of sites.
Dec 2007 - Dec 2013	**Part-time Programmer at Awave AB** *Web Development and Programming Consultancy Shop* Programming websites in PHP and .NET. Mostly "backoffice" adminstrative applications, with lots of obtuse SQL queries. Created three iPhone apps in Mono Xamarin. Desktop applications for invoicing and accounting on Windows. Server administration and setup in Linux and Windows. Security auditing/pentesting of websites.

Education

January 2017	Master of Computer Science, **KTH Royal Institute of Technology**, Stockholm Major: Computer Security Thesis: "Anonymous Javascript Cryptography and Cover Traffic in Whistleblowing Applications" | Supervisor: Prof. Sonja Buchegger
July 2013	Bachelor of Computer Science, **KTH Royal Institute of Technology**, Stockholm Thesis: "Voting Mix-Net" | Supervisor: Douglas Wikström

Volunteering Work

Dec 2016 - Feb 2018	Security Without Borders *Volunteering Organisation* At SWB I helped with maintaining and coding new features for the main www.securitywithoutborders.org website.

Scholarships and Certificates

2010	Cambridge Certificate of Proficiency in English (CPE): Grade A
2009	Cambridge English: Advanced (CAE): Grade A

Languages

Swedish:	Modersmål (Mothertongue)
English:	Fluent
German:	Basic Knowledge (A2)

Computer Skills

Advanced Knowledge:	Python, Java, .NET (C#), PHP, JavaScript, Linux, SQL, Webapp security, Webscraping, HTML/CSS
Basic Knowledge:	Android, C/C++, Rust, Ruby, Prolog, Haskell

Interests and Activities

Technology, Open-Source, Programming, Cryptography, Computer Security
Video-games, Philosophy, Baking

PROJECT SHOWCASE

These are some open source projects I've worked on. A more complete project list can be supplied upon request. I also have more projects on my github account, which you can find here: https://github.com/Tethik

Burn After Reading

A simple to use webservice for securely sending secrets. It works by encrypting texts in javascript, sending the key in such a way that the server should not see it. The server then stores the text in memory until either the recipient decides to "burn" the text or the time expires. I use it to send passwords and other secrets that I don't want to be kept saved in e.g. an email inbox or chat thread. Coded in javascript and python.

Demo: https://burn.blacknode.se
Src: https://github.com/Tethik/burn-after-reading

Tamperfree

A tool to verify static content on tor hidden service websites. It uses selenium to emulate the tor browser bundle in order to make a verifier that looks and acts just like a normal tor user would. By doing this I hope to achieve indistinguishability from a real user, so that the server can not differentiate between the verifier and real user. Mostly a proof of concept. Coded in python.

Src: https://github.com/Tethik/tamperfree

PYPI Python Packages

Throughout 2016-2017 I published some smaller python packages in the official python package index.

- Badger. A simple commandline program to generate SVG badges offline.
  https://pypi.python.org/pypi/badger

- Flask-Session-Captcha. A captcha generator for the Flask framework.
  https://pypi.python.org/pypi/flask-session-captcha

- simplegeoip. A simple wrapper library for getting geolocation from an ip.
  https://pypi.python.org/pypi/simplegeoip

Github Open Source Contributions

The following table is automatically generated every month using data from the Github API.
It shows which open source projects I've contributed code to via Pull Requests on Github.

Stars	Repository	Languages	Additions / Deletio
⭐ 38480	scrapy/scrapy	Python/HTML/Roff	(+207/-71)
⭐ 21046	pypa/pipenv	Python/Roff/Makefile	(+1/-1)
⭐ 9249	elastic/beats	Go/JavaScript/Python	(+1203/-1)
⭐ 6394	kennethreitz-archive/records	Python/Makefile	(+79/-8)
⭐ 6203	pyeve/eve	Python/Makefile	(+29/-13)
⭐ 4045	Netflix/security_monkey	Python/Dart/HTML	(+3/-3)
⭐ 1633	modoboa/modoboa	Python/JavaScript/HTML	(+1/-1)
⭐ 769	UnitedIncome/serverless-python-requirements	JavaScript/Python	(+5/-2)
⭐ 456	jxson/front-matter	JavaScript/TypeScript/Makefile	(+2/-2)
⭐ 291	paulmillr/readdirp	JavaScript	(+1/-1)
⭐ 280	Vazkii/Quark	Java/JavaScript/PHP	(+1/-1)
⭐ 254	labstack/echox	Go/HTML/JavaScript	(+5/-2)
⭐ 207	shawnmclean/Mandrill-dotnet	C#/PowerShell	(+1245/-1217)
⭐ 165	hashicorp/terraform-aws-nomad	HCL/Shell/Go	(+54/-10)
⭐ 158	maxcountryman/flask-seasurf	Python	(+4/-4)
⭐ 140	arabold/serverless-sentry-plugin	TypeScript	(+1/-1)
⭐ 112	mattermost/docs	HTML/Python/CSS	(+4/-4)
⭐ 83	jrxFive/python-nomad	Python	(+26/-0)
⭐ 46	Netflix-Skunkworks/raven-python-lambda	Python	(+44/-16)
⭐ 36	AndreiRegiani/falcon-jsonify	Python	(+23/-11)
⭐ 33	hbldh/pybankid	Python	(+61/-5)
⭐ 31	glesys/API	PHP/Shell/Ruby	(+94/-0)
⭐ 28	securitywithoutborders/newsletter		(+61/-62)
⭐ 14	securitywithoutborders/website	CSS/JavaScript/HTML	(+3589/-637)
⭐ 6	vortec/hug_sentry	Python/Makefile	(+23/-2)