Bjarni Jens Kristinsson

Curriculum Vitae

"It is quality rather than quantity that matters."
-Lucius Annaeus Seneca, *Moral Letters to Lucilius*

Work experience

2022 – curr. **Team Lead**, *Systecon*, Stockholm, Sweden
Hands-on manager of a team of 4 to 8 developers. Building and maintaining a strong team by focusing on team dynamics, motivation and people growth. Modernising our tech stack, culture and internal dev environment. Developing in React/Typescript, Python and Azure.

2020 – 2022 **Senior Software Engineer**, *Klarna*, Stockholm, Sweden
Driving a change towards automated and data-driven recruitment at Klarna. Started initiatives and led the technical work of using robots and algorithms to evaluate online profiles at bulk and generating personalised reach-out messages based on their data. Worked tightly with CEO and operational TA teams in short feedback loops. We drastically increased response and conversion rates of candidates we reached out to compared to previous practises. Covered as team Accountable Lead where I managed the roadmap, timelines and deliverables with upper management. Hired and onboarded new team members to meet the demand put on the team. Mentored and coached other team members. Other responsibilities outside of team:
* Reviewing coding submissions and conducting skills interviews for the Python Stockholm hiring pipeline. Onboarding and coaching new members to the hiring pipeline.
* Competence Lead for Engineers in the Staffing domain. Responsible for their individual performance and professional growth. Conducting regular one-on-ones, setting and tracking goals, managing probation period and doing salary reviews.

2020 **Software Engineer**, *Klarna*, Stockholm, Sweden
Engineer in the Intelligent Resourcing team. Built our CI/CD pipelines, simplified the code base and mentored other engineers. Wrote Python code to automate various processes and workflows within Staffing domain and worked with recruitment data to provide basic analytic insights. Drove a change in the way we worked and interacted with other teams from being reactive to being proactive of our customers need.

2019 – 2020 **Senior DevOps Consultant**, *Opsdis*, Stockholm, Sweden
Projects include: Visualising Mobility-as-a-Service data using Prometheus and Grafana. Alerting based on predictive metrics using statistical models in Scikit (Python). Diff-based syncing of hardware infrastructure into Nagios-based monitoring systems using HTTP APIs.

2015 – 2018	**Software Developer**, *WuXi NextCODE*, Reykjavik, Iceland
	Started off in DevOps like assignments of maintaining, executing and further developing deployment (Chef, Ansible) and infrastructure (AWS CloudFormation, Terraform) code. Handed it over to a newly created Backend Group and joined the Data Group. Developed Python code to import and process genomic data in our system and integrating 3rd party platforms with ours. Built, tested and deployed components in CI/CD loops using tools such as Jenkins, Docker and Ansible. Spent the summer of 2018 creating a benchmarking suite for the company's core software which runs in a CI loop to detect performance regression.
Summer 2015	**Software Developer**, *Handpoint*, Kopavogur, Iceland
	Implementing protocols with partners and developing card reader software. Didn't like it and quit.
Summer 2014	**Software Developer**, *Invector*, Reykjavik, Iceland
	Developing a web app for clients using Invector's statistical model to estimate prices of real estates worldwide. Working primarily on designing the database, the user system and other backend programming.
Summer 2013	**Software Developer**, *Reykjavik Energy*, Reykjavik, Iceland
	Brought in to program an interactive educational game about Reykjavik Energy's CarbFix project. Worked with three Master's students who designed the game and wrote the educational material. Coded the game in raw JavaScript using images and graphics drawn and provided by them.
Summer 2013	**Web programming**, *Reconesse*, Reykjavik, Iceland
	Together with two other university students we developed an interactive educational game about interesting female role models in women's right history for their website. The project received a grant from Rannís' Icelandic Student Innovation Fund.

Development tools

Languages	Python, TypeScript/JavaScript
Mindset	DevOps, TDD, CI/CD, ETL pipelines, data manipulation, end-to-end ownership
Toolbox	AWS, Azure, Docker, Jenkins, Travis, Ansible, Terraform, Linux, Bash/Zsh, LaTeX
Data analysis	Pandas, NumPy, Keras, TensorFlow, R, Octave/MatLab, Prometheus, Grafana, SQL

Education

2017 – 2019	**M.Sc. in Computer Science**, *Reykjavik University*, Iceland, *9,12* (out of 10)
	Spent the year 2017–18 at *Vrije Universiteit Amsterdam* in the Netherlands taking courses on distributed systems, concurrency algorithms, coding theory and cryptography. RU courses on topics such as machine learning, deep neural networks and combinatorics. MSc thesis named *Searching for combinatorial covers using integer linear programming* (available from `http://hdl.handle.net/1946/34919`).
2012 – 2015	**B.Sc. in Mathematics**, *University of Iceland*, Reykjavik, *8,55* (out of 10)
	Specialization in Computer Science. Elective courses in subjects such as algorithms, probability theory, combinatorics and graph theory. President of the student union Stigull during the school year 2013–14. Wrote a thesis named *Occurrence graphs of patterns in permutations*
2007 – 2011	**Stúdentspróf**, *Reykjavik Junior College*, Reykjavik, *7,89* (out of 10)
	Physics department. Received an acknowledgement for excellent results in Mathematics at graduation. Voted class councillor in final year.

Master thesis

title	Searching for combinatorial covers using integer linear programming
supervisor	Henning A. Ulfarsson, Assistant Professor at Reykjavik University Christian Bean, Postdoctoral Researcher at Reykjavik University
abstract	We introduce the CombCov framework which is a generalization of the Struct algorithm introduced by Bean, Gudmundsson, and Ulfarsson in *"Automatic discovery of structural rules of permutation classes"*. We give a simple example of an application of the framework to *avoidance sets* of *words* and discuss in detail how to generate *rules* of lesser complexity and how a cover is verified up to a certain size using integer linear programming. We then apply the framework to various published results on *permutations* avoiding *mesh patterns* and try to find covers of similar problems with some success. We show that CombCov is a powerful tool in guiding humans by coming up with conjectures that would otherwise have required substantial effort to discover manually.
url	`http://hdl.handle.net/1946/34919`

Bachelor thesis

title	Occurrence graphs of patterns in permutations
supervisor	Henning A. Ulfarsson, Postdoctoral Researcher at Reykjavik University
abstract	This paper is based on a generalization of the idea behind the proof of the *Simultaneous Shading Lemma* by Claesson et al. (2014). We define the *occurrence graph* $G_p(\pi)$ of a pattern p in a permutation π as the graph with the occurrences of p in π as vertices and edges between the vertices if the occurrences differ by exactly one element. We study the general properties of the occurrence graphs and some interesting extreme cases. The main theorem in this paper is that every *hereditary property* of graphs produces a *permutation class*.
url	`http://hdl.handle.net/1946/22017`
url	`https://arxiv.org/abs/1607.03018` *(preprint)*
url	`https://doi.org/10.2140/involve.2019.12.901` *(publication)*

Teaching

2018 – 2019   **Teacher Assistant**, *Reykjavik University*, Reykjavik
Teacher assistant and grading homework in courses on Calculus, Statistics and Discrete Mathematics.

Fall 2013   **Teacher Assistant**, *University of Iceland*, Reykjavik
Teacher assistant in a Linear Algebra course.

2012 – 2014   **More teaching**, *Various employers*, Reykjavik
I have taught a computer science class for the Youth University (summer 2013), revision courses in mathematics for Nobel tutoring Ltd. (2012 – 2013) as well as I have had many students for private tutoring in mathematics (2012 – 2014).

Interests

family   As a father of two, much of my free time is devoted to my family. If it isn't time spent on the playground with my sons or at home playing cards with my partner, I might be cleaning the floor around the baby chairs or washing their clothes.

sports   I love all kinds of sports. Mostly I ride bikes either recreationally or as a way to commute to work or on other errands. I like to go on hikes and I try camping at least once a year. I play football regularly and sometime I've lifted weights at a gym. In the summer of 2012 my friend and I went on a 2 month biking tour through Europe, visiting six countries and bicycling over 1600 km.

chess   For many years I studied chess and I achieved a peak ELO rating of 2062. In 2007 I became national champion U20 and in 2009 I played in the World Youth Chess Championship held in Antalya, Turkey. Twice I became Nordic champion and three times national champion with my junior college chess team. I have taught chess in various elementary schools and organized my own summer chess workshops.

math   I am deeply intrigued by the concept of infinity and I take joy in intuitive proofs by contradiction. During junior college I participated in multiple mathematics competitions and twice I was selected to compete with the national team in Baltic Way.

tech   Previous hands-on hobby projects included autonomous Raspberry Pis hosting websites and recording timelapses. Set up `blog.bjk.is` to document some of it. I manage my own VPS hosting websites and experimenting with various webservices.

Languages

Icelandic   native language
Swedish   fluent
English   full professional proficiency
French   beginner level

References

Available upon request.

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in *bjk17*   •   ○ *bjk17*   •   *Last updated on August 22, 2024*   *4/4*