

Bjorn Elvar Thorleifsson

Data Engineer & Software Developer

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Summary

Data engineer and software developer specializing in high-performance data pipelines (Rust, Python, SQL) for medical-device data; MS student in Computer Science (data engineering) at the University of Illinois.

Experience

Software Developer, Cardiosense – Chicago, IL June 2024 – present

- Developed the CardioCare clinician-facing mobile application from the ground up using Flutter and Dart
- Engineered reliable Bluetooth Low Energy (BLE) integrations to facilitate seamless medical device communication and over-the-air firmware flashing
- Optimized app state management and performance, ensuring smooth UI transitions and a stable experience for clinical end-users

Research Assistant / Backend Engineer, Reykjavik University – Reykjavik, Iceland May 2023 – Sept 2023

- Developed a .NET REST API for a web-based sleep research platform used for machine-learning data labelling
- Scaled the platform's database horizontally using a sharding pattern
- Cut storage footprint 95% by compressing signal file tables, improving segmentation retrieval times by 80%

Audio Engineer, Storytel – Reykjavik, Iceland May 2022 – Nov 2022

- Recorded, edited, and mixed audiobooks; coordinated with production leads and narrators to keep titles on schedule

Project Manager / Sound Technician, Hljomaholl / Icelandic Museum of Rock 'n' Roll – Reykjanes-bær, Iceland Feb 2019 – Sept 2021

- Coordinated live events, mixed live sound, and produced content for the Icelandic Museum of Rock 'n' Roll

Education

University of Illinois, MS in Computer Science, data engineering emphasis – Illinois, USA Jan 2026 – present

Reykjavik University, BSc in Computer Science – Reykjavik, Iceland Aug 2021 – June 2024

- Dean's list, spring 2024

Taekniskolinn, Associate's in Audio Engineering – Reykjavik, Iceland Jan 2018 – Dec 2018

Projects

Sleeper Live League Table — JavaScript Nov 2024

- Fetches league data for any user from the Sleeper fantasy-football API and recalculates standings live as matchups progress

NFL Pick 'em — .NET, C#, TypeScript, Next.js, PostgreSQL June 2023

- Built a web app for running weekly NFL pick'em competitions, used daily by ~200 users
- Integrated the ESPN API for schedules and live results; deployed on Fly.io and Vercel

NBA Scores: Alfred Workflow — Python Oct 2022

- Command-bar workflow surfacing live NBA scores via the NBA API; featured on the official Alfred blog

Publications

World of ScoreCraft: Novel Multi-Scorer Experiment on the Impact of a Decision Support System in Sleep Staging June 2025

B. Holm, A. Óskarsson, *B. E. Þorleifsson*, et al.
10.1111/jsr.70113 (Journal of Sleep Research)

Technical Skills

Languages: Python, C#, Rust, JavaScript, TypeScript, SQL, LaTeX

Frameworks: .NET, EF Core, React, Next.js

Developer Tools: Git, Docker, Azure, AWS, bash

Libraries: pandas, NumPy, polars, Matplotlib