Daniel Vliegenthart

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ABOUT ME
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As a pragmatic senior software engineer and technical leader with more than 9 years of experience, I thrive in an environment with open communication, constructive feedback and challenging problems to solve with confidence. The pursuit of curiosity and understanding is what motivates me.

I am eager to join a progressive, forward-thinking organization that leverages cutting-edge technologies to drive meaningful impact and offers abundant opportunities for professional growth.

With a strong interest in the real-world applications of AI and vast experience in data engineering & science and leadership, my focus lies in fostering a team culture of collaboration, ownership and learning. I recognise that each person has unique motivators and goals. I firmly believe in the right balance between using existing tools and building novel solutions to solve complex problems with high velocity.

WORK EXPERIENCE
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CTO @ Parsel.ai | London, UK   Jan 2023 - Present
-   As CTO, I strive to build technology that solves our customers' concrete challenges of interrogating unstructured data that is trapped in documents, with the goal to save them time.
-   Led a diverse and cross-functional team of seven senior DevOps, frontend & backend engineers, data scientists and junior interns.
-   Built and deployed hybrid (semantic + sparse) document search, using PyTorch, Transformers (SPLADE), LLMs and Pinecone.
-   Built multiple document search and Q&A POCs in Python with LangChain and LLMs for customer leads, which clearly demonstrated how we can save them time and reduce errors.
-   Led client-facing meetings to discover inefficiencies to solve, facilitate value delivery and overcome technical hurdles, which often resulted in lasting and fruitful long-term relationships.
-   Collaborated continuously with product, UX and sales to define the product's technical strategy, roadmap and improve product market fit.

Tech Lead @ Parsel.ai | London, UK   Jul 2021 - Jan 2023
-   Headed up the team that built a complex document processing & analysis serverless pipeline:
    1. An algorithm that structures data from unstructured sources (PDFs and images), combining state-of-the-art technologies like NLP, OCR and ML, with our novel in-house built visual clues identifier and table extraction algorithm. Deployed on AWS, with Step Function serverless resource orchestration and map-aggregate patterns for optimal parallelization and scalability.
    2. Backend GraphQL API that handles data management and flow between various services, using serverless, Node.js, Typescript, NestJS and Domain-Driven Design (DDD).
-   Led recruitment and grew the team from scratch to five engineers.
-   Advocated for coding standards; implemented pre-commit tooling and automatic code quality analysis (local and CICD) to remove development friction and decrease software bugs.
-   Identified and addressed technical debt to improve monitoring, maintainability and performance. This resulted in a significant latency reduction, clearer error alerting and cost savings.

Data Scientist & Full-stack Engineer @ Tellimer | London, UK   Oct 2018 - Jul 2021

- I single-handedly developed and maintained Tellimer.com's ETL and fan-out dynamic event routing system to increase flexibility and decrease duplication. Built with Python, AWS Eventbridge, AWS SQS, and AWS Kinesis Firehose; operating seamlessly for over 3 years and handling over 250 million events.
- To better understand our customers' behavior, I independently designed, built, and managed Tellimer.com's web engagement analytics platform utilizing Vue.js, Node.js, TypeScript, AWS, Snowflake and GraphQL. This resulted in a strong increase in upsells to clients with high engagement, alongside fraudulent usage detection.

Lead Full-Stack Web Developer @ Ans Delft | Delft, NL (Part-Time)   Oct 2015 - Aug 2017

Built and managed core features of the Ans online education platform, using Ruby on Rails, JavaScript (jQuery and CoffeeScript), PostgreSQL, RSpec, MaterializeCSS and SASS.

Full-Stack Web Developer @ Transvise | Delft, NL (Part-time)   Oct 2013 - Sep 2015

Worked on a blended learning platform with Ruby on Rails, JavaScript (jQuery), PostgreSQL, RSpec and SASS.

SOFTWARE ENGINEERING SKILLS
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Programming languages:
Python (expert), Javascript (expert), Typescript (intermediate), Ruby (intermediate) and Java (proficient)

Machine Learning & Data:
PyTorch, Pandas, Numpy, LangChain, Transformers, Scikit-Learn, Matplotlib, Hadoop and Spark

Database Technologies:
Pinecone Vector Database, DynamoDB, PostgreSQL, MongoDB, Snowflake, Redis and Redshift

Frameworks & Libraries:
Serverless, Node.js, GraphQL, Flask, NestJS, Ruby on Rails and Pulumi

Miscellaneous:
AWS, Datadog, Git, VS Code and LaTeX

PUBLICATIONS
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[Coner: A Collaborative Approach for Long-Tail Named Entity Recognition in Scientific Publications](#)

EDUCATION
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Master of Science in Computer Science @ Delft University of Technology   Aug 2015 - Aug 2018

- Program specialization in Data Science & Technology, with key courses in Information Retrieval, Recommendation and Data Engineering.
- An average grade of 8.4/10.0 (4.0 GPA in the USA[1]).

NLP Research @ National Institute of Informatics | Tokyo, Japan   Sep 2017 - May 2018

My master thesis, in collaboration with Aizawa's NLP lab in Tokyo, on crowdsourced named entity recognition in scientific publications was [published](#) and received a grade of 8.5/10.

Bachelor of Science in Computer Science @ Delft University of Technology   Aug 2012 - Jun 2015

- Specialization in Intelligent Data Analysis, with a focus on Big Data Processing and Modeling, Probability & Statistics and Algorithm Design.
- Bachelor Project: Modularization of Learning Tools at FeedbackFruits (9.0/10.0).
- An average grade of 7.6/10.0 (3.7 GPA in the USA[1]).

Exchange Semester in Computer Science @ KTH | Stockholm, Sweden   Aug 2016 - Jan 2017

Exchange Minor in Computer Science @ University of Waterloo | Canada   Aug 2014 - Dec 2014

LANGUAGES AND INTERESTS
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Languages:
English (bilingual proficiency) and Dutch (native proficiency)

Interests:
Recently I've started piano lessons and find it calming and enjoyable to sit down at the end of my day behind a different kind of keyboard. Aside from this, I can pour my creativity into baking and cooking. When I have a longer break from my desk, I love traveling the world and hiking.

1. https://www.findamasters.com/guides/gpa-grade-point-average