AXXES

Dylan Van Parys

Java Consultant

Aalter, Belgium

11/03/1998

Skills

Java	●●●○	TypeScript / JavaScript	●●●○
Python	●●●○	React (Native)	●●○○
Machine Learning	●●●○	Express.js	●●○○
Data science	●●○○	Git	●●○○
Docker / Kubernetes	●○○○	Agile / Scrum	●●○○

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Projects

Comsof

Client Delivery Software Engineer

01/2022 - Present

After my 3 month onboarding period I joined the Client Delivery team at Comsof. This team works on per client-basis developing very specific features and product modifications as required by and negotiated with individual clients of Comsof. Upon joining the team I immediately joined the startup of the first scrum CD team in which we work as a team in 2-week sprint cycles that work on the most pressing customization packages.

Tasks

- Software developer in CD scrum team

Skills

Java 11 | JUnit | Mockito | JavaFx | Scrum | Jira

Your-Tickets

React Native mobile application developer

11/2021 - Present

In my spare time I work as sole responsible on the creation of the Your-Tickets mobile app for both IOS and Android. I worked as the tech lead for this app from day-zero being responsible for all technical and architectural design decisions and working in close cooperation with the Your-Tickets team for UI/UX design. The application makes use of the expo framework which builds on top of react-native to allow easy and fast single-codebase development for both IOS & Android. The application consumes a REST api allowing customers of Your-Tickets to scan event tickets at event entrances / drink or food vouchers at bar/food stands using their mobile devices. This application will in the future be used to scan over 100 000 tickets yearly.

Skills

Expo | React Native | TypeScript | JavaScript | RestAPI | UI/UX | Project Management | Architecture

Your-Tickets

Technical consultant

11/2021 - Present

As a technical consultant I use my general knowledge as a CS engineer to advise the Your-Tickets team on any technology and general IT-related decisions. Your-Tickets was a company founded by two close friends of mine who both have a background as civil engineers with little to no initial development experience. Therefore my advice helps them to make informed technological decisions and educates them on very specific CS related topics that would otherwise be outside their grasp. Specifics include the development of their REST api for the Your-Tickets mobile app, the use of the PHP Monolog logging framework to improve their development workflow, reworking of their database scheme, optimization of peak-load sensitive code...

Skills

Architecture | PHP | RestAPI | SQL

Comsof

R&D Software Engineer
10/2021 - 12/2021

Worked in the R&D Scrum team during my 3 month onboarding period. Worked mostly on the core fiber network designer product 'Comsof Fiber Designer' but also worked on in-house products like the test-automation framework and Comsof Cloud. This involved the occasional front-end work in Angular for both Comsof Fiber Designer and the test-automation-framework.

Skills

Java 11 | JUnit 5 | Mockito | Angular | TypeScript | Jenkins | Scrum | Jira

Universiteit Gent

Master Thesis Student
09/2020 - 06/2021

Investigating interpretable machine learning to deepen model understanding in intrusion detection

Received highest distinction, summa cum laude (score: 18/20)

Modern day network intrusion detection systems (systems that try to detect cyber attacks at the network level) are generally knowledge based using a database of known attack signatures to try to detect intrusion attempts. The main disadvantage of this approach is that it is not robust against new zero day attacks or slightly adapted known attacks. With the gain in popularity that machine learning has seen in recent years the interest for machine-learning as a solution to these knowledge-based issues has also increased. The hope is that there must be some ubiquitous properties of malicious traffic that can be learned. If this assumption should be true it would suffice to make sure that a model is learned on a representative dataset of inherently different attacks to offer adequate protection against all types of network intrusion attempts. However as of 2021 machine learning has yet to be adopted in industry intrusion detection systems.

This dissertation shows the value of interpretable machine learning for research by investigating the decision-making process of a state-of-the-art deep learning intrusion detection model. The experimental results show that IML methods can be leveraged to gain deeper understanding of the classification behavior and decision-making of black-box deep learning intrusion detection models. Results also show that only a limited set of network flow features are used to classify malicious traffic and that the model learns different rules for different attack vector families. This dissertation also shows that is possible to diagnose unexpected or unwanted model behavior using interpretable machine learning. However there are also signs in the results that current modern intrusion detection datasets have issues with attack vector diversity. The dissertation ends with the conclusion that since state-of-the-art models achieve high performance on datasets but are not adopted by industry, a paradigm shift away from model-centric and towards data-centric research should be the way forward for future work if machine-learning based intrusion detection is to see real-world application.

Skills

Deep learning | Machine Learning | Tensorflow | Data science | Python | Algorithms | Data visualization | Scientific writing | XAI

Twitter API – COVID Sentiment Analysis

Data scientist

03/2020 - 05/2020

For the mandatory project of the Big Data Science course at the university of Ghent I investigated together with a fellow student whether it was possible to detect the peak of infections for the first wave of the COVID pandemic in Belgium from the tweeting behavior of Belgians. Our hypothesis was that the peak of the pandemic coincides with a high death count and that this probably had a detectable influence on the sentiment of tweets during this period. To validate this hypothesis we collected a sample of tweets from Belgium in dutch between march and early may of 2020. Using automated translation and sentiment analysis techniques we analyzed these tweets. This analysis indeed revealed a clear increase in negative sentiment around the period of the peak (plotting the curve of sentiment over time actually revealed a curve similar to that of the number of deaths/infections) therefore indicating our hypothesis was correct.

Tasks

- Data collection
- Data preprocessing
- Natural language processing

Skills

dictionary-based NLP | Twitter API | Python

Design Project - CrowdFlow

CI/CD liason, Developer, Solution architect, Communication liason

09/2019 - 05/2020

This course focuses on the actual application of design principles in a team of students. It enables the students to propose design assignments, defend the proposals, and execute them within heterogeneous teams (with different backgrounds and interests) in accordance to the chosen courses in their respective curricula. The project realization takes place by the whole team, with a dedicated task assignment, both technical tasks and project management tasks. The project management and the development of entrepreneurial skills, such as customer aware design, are an important part of the project.

Together with a group of 8 students we created a service for monitoring crowdedness at large events like festivals using deep learning techniques on live video streams of the event terrain. Furthermore we enabled integration of this monitoring systems with e-transaction systems using an industry-standard API allowing us to estimate waiting times at drink and food stands using both the real-time crowdedness and transaction data. Using these estimated waiting times we would then be able to recommend the optimal (in sense of expected waiting time) queue to attendees leading with the goal of load balancing of the stands. As a result of the COVID pandemic causing a lockdown in Belgium for the final months of the project (the development stage) this project also became a logistic challenge as the remainder of the course was fully online. This increased the importance of good project management. Throughout the entire project an Agile result-based work methodology was employed by splitting up the semesters in two-weekly sprints.

In the end we presented our services in a final online demo fair under the banner of CrowdFlow with the according motto 'Manage the flow and keep waiting times low'.

Skills

Project management | Software Archirecture Design | UML | Python | Git | GitLab | Trello | Unit Testing | Docker | Microservice (API) design | Agile development | Jira

Education

University of Ghent - Master of Science, Computer Science Engineering

Master

09/2016 - 06/2021

Graduated with distinction, cum laude (score: 694/1000)

CS related electives:

- Artificial Intelligence
- Big Data Science
- Recommender Systems
- Software Hacking and Protection

Broadening electives:

- Communication (university-broad course focussing on developing both oral and written presentation skills)
- Macro Economics (course from bachelor of economics)
- Project Management (course about dynamic scheduling of projects given by renowned professor Mario Vanhoucke)

Emmaüs Secundair Aalter - Latin & Mathematics

High School

09/2010 - 06/2016

- Laureate for Latin
- Part of the Latin course in the final year ended with oral (public speaking) exam in front of a filled auditorium and expert jury

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Trainings

Java Software Development Traineeship

Axxes

16/08/2021

6 week fulltime traineeship by senior Axxes consultants

Technologies: (Modern) Java, Docker, Linux, Amazon Web Services (AWS), GIT, Kubernetes

Back-end & Databases: Spring, Spring Boot, Spring Data, Spring Security, Big Data, MongoDB

Front-End: JavaScript, Angular, React

Testing: Software Testing, Mocking & Unit Testing

General & Methodologies: Microservices, Developing Enterprise Applications, Scrum, SOLID, Clean Code, Monitoring & Logging, Continuous Integration & Continuous Development, Dealing with legacy, communication skills

Languages

	Understanding	Speaking	Writing
Dutch	Native	Native	Native
English	Native	Fluent	Fluent
French	Fluent	Intermediate	Fluent
German	Intermediate	Basic	Basic

Weblinks

GitHub
https://github.com/mydios

Linkedin
https://www.linkedin.com/in/dylan-van-parys/

GitHub Comsof
https://github.com/dylanvanparys