

# Tristan Hay

FREELANCE P&C ACTUARY · R DEVELOPER

Rue Van Van Waeyenbergh 22 C21, 1140 Brussels, Belgium

☎ (+32) 0495/707199 | ✉ tristan@owlmind.be | 📱 tristan-hay-1197902a/

## Summary

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Tristan Hay has more than 10 years of experience as an actuary for insurance companies in Belgium. He has extensive knowledge in technical pricing, commercial pricing, renewal pricing and portfolio management both for retail and commercial P&C insurance. He is a very experienced developer comfortable coding in languages such as R, Python and SQL. Known for his collaborative nature, Tristan is a dedicated team player who eagerly shares his enthusiasm and knowledge of P&C pricing.

## Assignments

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### Belgian insurer

*Brussels, Belgium*

PORTFOLIO MANAGEMENT AND RENEWAL PRICING

*Dec. 2023 - PRESENT*

- Strengthen the new borned inforce management team.
- Contribute to the portfolio sanitization exercise in commercial line by identifying clients and policies that should be considered by the operational teams.
- Conduct segmented portfolio indexation for the motor commercial line portfolio, suggesting personalized indexation rates using experienced rating.

### International commercial line insurer

*Brussels, Belgium*

TECHNICAL PRICING FOR COMMERCIAL LINE PROPERTY INSURANCE

*Jul. 2023 - Oct. 2023*

Design and the implementation of a technical pricing pipeline for an international commercial line insurer, using Python.

### Belgian insurer

*Brussels, Belgium*

RELATIONAL DATABASE FOR P&C TECHNICAL DATA

*Mar. 2023 - Nov. 2023*

- Design of a P&C relational data mart as a freelance consultant, simplifying data management for pricing actuaries.
- Data pipeline implemented with R targets and data storage in MS SQL.

## Professional Experience

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### Owl Mind Analytics

*Brussels, Belgium*

FREELANCE P&C ACTUARY

*Sept. 2023 - PRESENT*

See assignments.

### Wikitree Group

*Brussels, Belgium*

HEAD OF DIGITAL AND IT SOLUTIONS

*Sept. 2022 - Jun. 2023*

- Lead developer of a P&C product benchmark web platform dedicated to insurance product managers.
- Technology stack : R Shiny, Docker, Ubuntu server and Shinyproxy

### P&V Group

*Brussels, Belgium*

NON-LIFE BUSINESS ACTUARY

*Apr. 2021 - Aug. 2022*

- Develop an R Shiny web application to quickly give the underwriters useful insights about a motor policy or a fleet.
- Help P&C product management to understand their portfolio by modeling the churn probability of the policyholder.
- Lead the project on the design and the implementation of the data model for the non-life analytics teams.
- Lead the development of the Economic Combined Ratio metric and link it with the SII economic capital.
- Give R training to the other team members and support them in their learning journey.

### P&V Group

*Brussels, Belgium*

IFRS 17/9 PROJECT MANAGER

*Jul. 2020 - Mar. 2021*

- Coordinate the methodological discussions between the teams (actuarial department, finance department and external support) involved in the project.
- Ensure that implementation is in line with the defined methodology.
- Lead the discussion with the auditor on the methodological positions taken by P&V.
- Responsible for the budgeting and resources follow-up.

## P&V Group

Brussels, Belgium

NON-LIFE PRICING ACTUARY

Nov. 2017 - Jun. 2020

- Monitor retail motor profitability and growth. Ensure that profitability is in line with the target loss-ratio. Suggest and implement pricing adjustment if required.
- Develop and maintained a custom R package for the pricing team.
- Helped to automate underwriting processes for car business with the design of an acceptance scoring.
- Develop an R Shiny application that helps to speed up the commercial pricing process by incorporating profitability and competitive constraints.
- Model claims frequency and severity for car insurance with GAM models in R.
- Develop long term pricing model in order to predict claims net inflation.
- Involve in the development of the bicycle insurance product.
- Involve in a cross-departemental task force leading the reflection on the group distribution strategy.
- Mentor actuarial students on various subjects.

## Forsides Actuary

Louvain-la-Neuve, Belgium

NON-LIFE ACTUARY CONSULTANT

Dec. 2016 - Oct. 2017

- Assess competitive position of two clients on Belgian car insurance market.
- Help a foreign company to define his entering strategy on the Belgian P&C market.
- Develop an R Shiny application for clients in order to support dynamic pricing process in car insurance.

## L'Ardenne Prévoyante (AXA Belgium subsidiary)

Stavelot, Belgium

LIFE AND NON-LIFE ACTUARY

Aug. 2013 - Nov. 2016

- Design and price new P&C products using SAS and R.
- Design and perform calculation of the risk appetite.
- Handle Solvency II reporting : standard formula calculation, ORSA report.
- Optimize the P&C reinsurance cover.

## AXA Belgium

Brussels, Belgium

LIFE RISK MANAGEMENT INTERN

Aug. 2012 - Jul. 2013

## Education

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### Université Libre de Bruxelles

Brussels, Belgium

MASTER IN ACTUARIAL SCIENCES

Sept. 2011 - Jun. 2013

- Master thesis : "Claim modelling with extreme value theory, reinsurance pricing and impact on the solvency capital."

### Université Catholique de Louvain

Louvain-la-Neuve, Belgium

MASTER IN BUSINESS ENGINEERING (ECONOMICS OF STRATEGY AND INNOVATION)

Sept. 2009 - Aug. 2011

- Master thesis : "An open innovation framework : the Prayon case."
- Mercator Exchange, Pontificia Universidad Catolica de Chile

### Université Catholique de Louvain

Louvain-la-Neuve, Belgium

BACHELOR IN BUSINESS ENGINEERING

Sept. 2006 - Aug. 2009

### International Exchange with AFS

Tuxtla Gutierrez, Mexico

Aug. 2005 - Jul. 2006

## Other

- Jun. 2018 - Seminar - "Stan in Insurance Workshop"
- Jun. 2018 - Seminar - "Insurance Data Science"
- Jul. 2017 - Datacamp - "Python Programmer track"
- Jul. 2014 - Seminar - "R in Insurance"
- Mar. 2014 - SAS course - "Predictive modelling for non-life insurers"

## Skills

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**Statistical programming** R (advanced), VBA (advanced), Python (intermediate), SAS (used to be intermediate)

**Other** R Shiny (advanced), UNIX shell (beginner)

**Languages** French (native), English (fluent), Spanish (fluent), Dutch (level A2)

## Other experience

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**AABr (Association des Actuares de l'ULB)**

BOARD MEMBER - SECRETARY

*Brussels, Belgium**Dec. 2017 - PRESENT***AABr (Association des Actuares de l'ULB)**

BOARD MEMBER

*Brussels, Belgium**Dec. 2014 - Nov. 2017***Unité Scoute Saint-Druon de Gouvry**

UNIT MANAGER

*Gouvry, Belgium**Aug. 2014 - Aug. 2018***Kap Course ("kot à projet" promoting sport)**

MEMBER (TREASURER 2008-2009)

*Louvain-la-Neuve, Belgium**Sep. 2008 - Jun. 2010***Unité Scoute Saint-Druon de Gouvry**

SCOUTS COORDINATOR

*Gouvry, Belgium**Aug. 2006 - Jul. 2010***Société royale des étudiants Luxembourgeois de Louvain-la-Neuve**

FRATERNITY MEMBER

*Louvain-la-Neuve, Belgium**Oct. 2006 - Jun. 2008*