

# dr. Ian FitzPatrick

Curriculum Vitae

#### Personalia

Date of birth 16 Juli 1981

Place of birth Halmstad, Sweden

Gender Male
Nationality British
Marital status Married

#### Profile

lan FitzPatrick is a Senior Data Scientist with a PhD in Neurolinguistics. He has expertise in language processing, statistics, statistical programming, and machine learning and has taught Bachelor's and Master's degree courses on classical statistics and experimental design. His research has been published in a number of high-impact journals (e.g., NeuroImage, Journal of Cognitive Neuroscience, Journal of Neuroscience, and Brain Research) and has occasionally featured in popular national media (for an overview see: ianfitzpatrick.eu/media/). As a Lead Consultant at Viqtor Davis (formerly Jibes Data Analytics), Ian has been responsible for designing and coordinating the development of AI solutions and bringing them to production.

#### Education

2011 Ph.D. - Neurolinguïstics, Radboud University Nijmegen

2006 M.Sc. - Cognitive neuroscience, Radboud University Nijmegen

2006 B.Sc. - Psychology, Leiden University

2000 No degree - Computer Science, Leiden University

1999 VWO, Regionale Scholengemeenschap Het Rhedens

## Key skills

## Proficiency Levels



No experience

Basic experience – average practical proficiency

Firm theoretical and practical grounding. Can work independently.

Above average practical knowledge and expierence. Ability to lead and coach.

Expert. Ability to architect, consult and advise end-to-end.

### Data science

Classical statistics	****
(e.g., GLM, ANOVA, mixed models)	
Bayesian statistics	***
(e.g., MCMC, JAGS, STAN)	
Mathematics	***
(e.g., Linear algebra, calculus)	
STATISTICAL PROGRAMMING	****
(e.g., R, SPSS, Matlab, Octave, Python)	
Machine learning	****
(e.g., Penalised regression, CART, SVM)	
NATURAL LANGUAGE PROCESSING	****
(e.g., NLTK, Spacy, IBM Watson, Microsoft LUIS)	

## Data engineering

RELATIONAL DATABASES	**
(e.g., MySQL, PostgresSQL)	
Non-relational databases	***
(e.g., ElasticSearch, MongoDB)	
BIG AND DISTRIBUTED DATA APPLICATIONS	**
(e.g., Hadoop, Spark, Map/Reduce)	
DISTRIBUTED STORAGE	**
(e.g., HDFS, S3)	
Containerisation	****
(e.g., Docker, Kubernetes)	

## Development

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Front-end programming	***
(e.g., JavaScript, HTML5, CSS, JQuery)	
Back-end programming	***
(e.g., PHP, Python (Hug))	
LOW-LEVEL PROGRAMMING	**
(e.g., C++, x86 Assembly)	
SCRIPTING	***
(e.g., Bash, Perl)	
Version control	****
(e.g., Git)	
Delivery frameworks	****
Dev/Ops, Agile (coahing), SCRUM	

Frankrijkstraat 313 - 6663 MB, Lent

## **Employment History**

#### Professional

2018–2019 Lead Consultant | Data Scientist, Vigtor Davis

#### Assignments and Responsibilities:

o Architecture, Development and Project Lead for Al solutions.

#### **Customers:**

- APG
- Interpolis
- o Centraal Beheer
- Achmea

Relevant skills: IBM Watson, Microsoft LUIS, Microsoft Azure, Python, Javascript, HTML5, CSS3, Git, Bash, Machine Learning, NLP, Docker, ElasticSearch, Neo4j, Kubernetes, Scrum, Dev/Ops

2017-2018 Senior Data Scientist, Jibes Data Analytics b.v.

#### Assignments and Responsibilities:

- o Architecture, Development and Project Lead for Al solutions.
- Scrum Master

#### **Customers:**

- Ministerie van Binnenlandse Zaken
- Schiphol Group
- o Rijksdienst voor Ondernemend Nederland
- Rabobank (Global Farmers)
- Achmea

Relevant skills: IBM Watson, Python, R, Java, Javascript, HTML5, CSS3, XSLT, PostgreSQL, Git, Bash, Machine Learning, NLP, Docker, ElasticSearch, Neo4j, Kubernetes, Scrum, Dev/Ops

2016–2017 Data Scientist, Jibes Data Analytics b.v.

## Assignments and Responsibilities:

o End-to-end development of Al solutions.

#### **Customers:**

- Rabobank
- Borusan

Relevant skills: IBM Watson, Python, R, Java, Javascript, HTML5, CSS3, XSLT, PostgreSQL, Git, Bash, Machine Learning, NLP, Docker, ElasticSearch, Neo4j, Kubernetes, Scrum

#### Assignments and Responsibilities:

- o fMRI research into conceptual representations in the brain
- o EEG research into representation of colour concepts
- o fMRI research into language switching

Relevant skills: R, MATLAB, SPSS, Penalised regression, CART, GLM, ANOVA, mixed models, cluster analysis, signal analysis, project management, MySQL, PHP, Perl, Git, Bash

2011–2016 Post-doc, Heinrich Heine Universität

#### Assignments and Responsibilities:

- Teaching courses on: Introductory statistics using R, Introduction to experimental methods and design, Neurocognitive Aspects of bilingualism.
- Supervising PhD, MA, and BA students.

Relevant skills: R, GLM, ANOVA

2010-2011 Post-doc, Universitat Pompeu Fabra

#### Assignments and Responsibilities:

- Designing and running experiments on speech production in bilinguals
- Supervising PhD, MA, and BA students.

**Relevant skills:** R, MATLAB, SPSS, ANOVA, mixed models, signal analysis, project management, Bash, Perl

2006–2009 PhD Student, Max Planck Institute for Psycholinguistics

#### Assignments and Responsibilities:

o PhD research into bilingual speech comprehension.

**Thesis:** Lexical interactions in non-native speech comprehension: Evidence from electroencephalography, eye-tracking, and functional magnetic resonance imaging, MPI Series in Psycholinguistics, 59.

**Relevant skills:** R, MATLAB, SPSS, ANOVA, mixed models, cluster analysis, signal analysis, project management, PHP, Bash, Perl

#### Volunteer causes

2000–2004 Volunteer, *Kindertelefoon Zuid-Holland (Child-Helpline)*Postbus 11142, Leiden

	leaching (selection)
2019	Hands on: Neo4j, <i>Achmea</i> Employee training
2019	Graph Databases for Knowledge Representation, <i>Achmea</i> Employee training
2019	Hands on: Docker, <i>Achmea</i> Employee training
2018	Hands on: Kubernetes, <i>Achmea</i> Employee training
2018	Kubernetes in depth, Achmea Employee training
2018	Inleiding Containerisation, Achmea Employee training
2018	Natural Language Processing (Tools & Frameworks), <i>Achmea</i> Employee training
2018	Machine Learning: Wat leert de machine?, <i>Achmea</i> Employee training
2015–2016	Statistics and experimental design, <i>Heinrich Heine Universität</i> Lecture series, Bachelor
2013	Introduction to neurolinguistics, <i>Heinrich Heine Universität</i> Lecture series, Bachelor
2012–2014	Introduction to experimental methods for psycholinguists, <i>Heinrich Heine Universität</i> Lecture series, Master
2011–2015	Neurocognitive aspects of multilingualism, Heinrich Heine Universität Lecture series, Master
2007–2015	Toolkit of cognitive neuroscience, <i>Donders Institute</i> Lecture & practical, Post-academic
	Media
	Radio & TV
2015	Bureau Kijk in de Vegte, <i>NPO Radio 2</i> •
2012	Pavlov, NTR •
2011	Hoe?Zo! Radio, NPO Radio 5 ▶
2011	Denktenk, BNR Nieuwsradio 🖸
	Written media
2011	Wie mail zegt, denkt aan meel, NRC Handelsblad 🕒
2011	Context hept tweetaligen bij begrijpen woorden met gelijke klank, Volkskrant 🗅

2011 Energievretende taalschakelaar, *Intermediair* 2011 Kou of cow? De context bepaalt, *Kennislink.nl* 

## Publications (selection)

- Redmann, A., **FitzPatrick, I.**, Hellwig, F. & Indefrey, P. (2014). The use of conceptual components in language production: an ERP study, *Frontiers in Psychology*, 5:363, 1-13.
- De Bruin, A., Roelofs, A., Dijkstra, T. & **FitzPatrick, I.** (2014). Domain-General Inhibition Areas of the Brain are Involved in Language Switching: fMRI Evidence from Trilingual Speakers, *NeuroImage*, 90, 348-359.
- FitzPatrick, I. & Indefrey, P. (2014). Head start for target language in bilingual listening, *Brain Research*, 1542, 111-130.
- Levy, J., Vidal, J., Oostenveld, R., **FitzPatrick, I.**, Démonet, JF. & Fries, P. (2013). Alphaband Suppression in the Visual Word Form Area as a Functional Bottleneck to Consciousness, *NeuroImage*, 78, 33-45.
- Strijkers, K., Baus, C., Runnqvist, E., **FitzPatrick, I.** & Costa, A. (2013). The temporal dynamics of first versus second language speech production, *Brain and Language*, 127(1), 6-11.
- Runnqvist, E., **FitzPatrick, I.**, Strijkers, K., & Costa, A. (2012). An appraisal of the bilingual language production system: Quantitatively or qualitatively different from monolinguals? In: T. K. Bahtia, & W. C. Ritchie (Eds.) *The Handbook of Bilingualism and Multilingualism, Second Edition.* Malden, MA: Wiley-Blackwell.
- **FitzPatrick, I.** & Indefrey, P. (2010). Lexical competition in non-native speech comprehension. *Journal of Cognitive Neuroscience*, 22(6), 1165-1178.
- Duhaime, M.B., Alsheimer, S., Angelova, R. & **FitzPatrick, I.** (2008). In defense of Max Planck. [letter to the editor] *Science*, 320 (5878) pp. 872b.
- **FitzPatrick, I.** & Weber, K. (2008). "Il piccolo principe est allé": Processing of language switches in auditory sentence comprehension. *The Journal of Neuroscience*, 28(18), pp. 4581-4582.