

## Summary

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- Data scientist with 6+ years of experience in machine learning, data analytics and statistics, solving real world business problems through data
- Innovator, eccentric, outside of the box thinker – Created two award-winning/patentable products
- Self-starter – Designed my own PhD project and submitted it 1 week before deadline
- Tireless – Energetic and passionate about resolving customer problems/issues
- Strategic thinker with strong analytical and creative problem-solving skills
- Quick learner and enjoys mastering new technologies and techniques
- Coaching professionals in data science and coding through First Tutor website ([shorturl.at/otvVY](https://shorturl.at/otvVY))
- Stamp 4 holder (full permission to work in the Republic of Ireland), 1 month notice period

## Skills

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- Extensive experience in R (8+ yrs), Perl (6+ yrs), Python (3+ yrs) and databases (SQL and MongoDB)
- Visualisation tools/packages – PowerBI, Tableau, Plotly, RShiny
- Big Data technologies – Hadoop, Hive, MapReduce, Spark (Python/R)
- ML algorithms – Supervised, Unsupervised, Semi-supervised, Reinforcement
- Familiar with other languages/technologies such as Scala, Java, C, C++, PHP, CSS, and HTML
- Others – Jupyter, Cloudera, TCP/IP, Confluence, Jira, Docker, Agile, Git, CRISP-DM, Linux
- Domains – Government, Healthcare, Pharmaceutical, Food, Genomics, Finance

## Work Experience

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### Manager, Data Analytics (Permanent, Dublin/Remote)

Nov 2020 – Present

Ernst & Young, Dublin/Remote, Ireland

- Working on government projects related to ongoing Covid pandemic response, informing the highest level of Irish government on disease trajectory, restrictions impact and projected demand for hospitals and testing
- Develop models to project hospital demand and testing demand, facilitating operational and resource planning
- Strive for process clean-up, improvement, and automation by implementing best data practices and strategies
- Lead data scientist on all projects, managing a team of up to six junior data scientists and analysts, and delivering stories backed up by data and analytics
- Interact with and present to senior stakeholders (EY Partners, and clients such as head of government bodies)
- Mentor and coach junior and senior team members in machine learning solution design and execution
- Founder of data science community within EY to organise live coding sessions on new technologies and tools

### Data Science Course Instructor (Contract, Remote)

May 2020 – Nov 2020

Coursera Inc., Dublin, Ireland

- Designing, creating and recording guided projects in the fields of data science, machine learning and computer science, both in R and Python - <https://www.coursera.org/instructor/nikunj-maheshwari>
- Delivering projects with code, explanations, and assessment to thousands of learners worldwide
- Inspiring learners through hands-on projects and providing constructive feedback

### Analytics Manager (Full time, Permanent)

Nov 2019 – May 2020

Group Internal Audit, Bank of Ireland, Dublin, Ireland

- Led and developed end-to-end analytical dashboards to visualize Operational and quality metrics and Customer impact for several portfolios (Mortgages, Car Finance, Business Banking, and Corporate Banking)
- Undertook integrated and individual data analytics assignments for senior management pertaining to Credit, Capital, and Customer Conduct for Retail and non-Retail products and services
- Converted business requirements into actionable insights and usable MI by joining large internal and external data sources using SQL and Hive, and carrying out analyses using Python and Tableau
- Established and strengthened internal and external stakeholder relationships

### Data Scientist (Full time, Contract)

Sep 2018 – Oct 2019

National Institute for Bioprocessing Research and Training (NIBRT), Dublin, Ireland

- Developed a novel, cutting-edge Quality Control (QC) monitoring and analytical platform for controlling and analysing biopharmaceutical processes, and forecasting and predicting risk

- Deployed Hadoop and Spark (backend), and RShiny and Plotly (frontend) application
- Responsible for storing, accessing, cleaning, and manipulating data via Spark and SQL pipelines
- Led the team for the development and deployment of machine learning (supervised & unsupervised) and time series (forecasting) models, and hyperparameter tuning, using R and Spark (translatable to Python/Java)
- Provided strategic recommendations to senior management for improving process quality and final product yield
- Funded by IDA and Siemens Ireland, winner of 2019 Pharma Awards

#### **Statistical Modeller (Full time, Contract)**

**Oct 2017 – Aug 2018**

Centre for Food Safety, University College Dublin, Dublin, Ireland & Creme Global, Dublin, Ireland

- Planned, designed, and executed innovative data analytics solution for Ireland's 5 largest food manufacturing companies – within 8 months. Solution is licensed out to Crème Global
- Gathered and formatted complex large-scale NGS microbiome data, and designed and coded ingenious machine learning models to (i) identify factors increasing/decreasing risk, and (ii) predict overall risk
- Utilised these models to test the effectiveness of different courses of action (ex. different sanitisation methods)
- Articulated modelling outputs (using smart visualisations) with business partners resulting in effective changes in their production lines to prevent growth of pathogenic bacteria
- Industry funded project (Enterprise Ireland, Crème Global and 5 Irish food manufacturers) - [bit.ly/300jXOp](http://bit.ly/300jXOp)

#### **PhD Graduate - Computational Infection Biology**

**Sep 2013 – Sep 2017**

Conway Institute (Prof. Denis Shields lab), University College Dublin, Dublin, Ireland

- Designed and executed statistical analyses of 2785 bacterial genomes using custom-built automated pipelines
- Developed and utilised machine learning models and statistical techniques to predict bioactivities of peptides
- Mentored and guided undergrad and graduate students for their projects in bioinformatics and machine learning
- Enhanced science communication by attending and organising conferences and symposiums, resulting in 9 presentations in oral and poster format (including Best Oral presentation award)

#### **Research intern - Molecular modelling**

**Jan 2013 – Jun 2013**

CSIR - Institute of Genomics and Integrative Biology, New Delhi, India

- Created structural models of peptides based on replica exchange molecular dynamics (REMD) simulations
- Gathered experience in remote data management, and running bash scripts on supercomputer

#### **Research project - Structural bioinformatics**

**May 2012 – Sep 2012**

King's College London, London, UK

- Analysed over 400 protein complexes for their backbone hydrogen bonds, which led to identification of vulnerable bonds at the interfaces which differentiates transient and obligate protein complexes
- Gained experience in performing text mining (Perl) and statistical analyses (R)

#### **Research project - Bioinformatics**

**Jan 2011 – May 2011**

SASTRA University, Thanjavur, India

- Analysed and visualised 850 protein sequences belonging to snake toxins
- Developed and implemented a classifier to classify snake toxins proteins and subsequently converted it to a webserver which was later published as TFX server (<http://sblab.sastra.edu/submittf.html>)
- Organised and attended national level conferences, leading to Best Innovator category presentation award

## **Education**

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**PhD in Computational Infection Biology, Sep 2013 - Sep 2017**, University College Dublin, Ireland

**MSc in Bioinformatics, Sep 2011 - Sep 2012**, King's College London, UK

**B. Tech in Bioinformatics, Jul 2007 - May 2011**, SASTRA University, Thanjavur, India

## **Awards, honours, and hobbies**

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Recipient of Wellcome Trust PhD scholarship amounting to €183,271

Designed and coded my personal blogging website ([www.drnikunj.com](http://www.drnikunj.com))

Mountain climber (Kilimanjaro and Toubkal), chef, footballer, cyclist, globetrotter