

# DR NIKHIL SHENAI

[Nikhil.Shenai@eekaytee.com](mailto:Nikhil.Shenai@eekaytee.com)

## SUMMARY

PhD with strong Quantitative and Business skills, passionate about Quantitative Product Development

Multi-disciplined in education (Cambridge, Imperial) and versatile with technology (C++, Python)  
Experienced in designing and implementing complex end-to-end solutions (IQT Advantage)  
in the fields of Data Science & Engineering, AI, and Algorithmic Trading  
Strong project management and client skills (Accenture, The Profs)

## SKILLS

### **Quantitative:**

[from PhD, MSc, MA,  
E K Technologies]

Time Series Models, Time and Spectral Estimation, Kalman Filter,  
Machine Learning (Ernest Chan, Andrew Ng), Statistical Learning (Hastie et al.),  
Stochastic and Point Processes, Financial and Derivatives Theory

### **Technologies:**

[from PhD, Accenture,  
E K Technologies]

C++, Python, SQL, Matlab, R, Java, JavaScript, MQL4, JForex, Cryptocurrency APIs,  
Betfair API, Web Scraping, Web Development, Business Intelligence & Data Warehousing, ETL

### **General:**

[from PhD, Accenture]

Lifecycles: Academic Research, Software Development, Consulting Project

## EDUCATION

**PhD in Financial  
Econometrics**  
2007 to 2012

**Imperial College Business School, South Kensington, London SW7 2AZ**

Research Topic: Dynamic Modelling of Irregular Times, Prices and Volumes at High Frequencies  
Key Areas: Time Series Models, Long Memory, Point Processes, Tick Data, Kalman Filter,  
Maximum Likelihood Estimation, Whittle Estimation, C++, Matlab, SQL, R

**MSc Finance**  
2003 – 2004

**Imperial College Business School, South Kensington, London SW7 2AZ**

A-grade average, specialisation in Financial Engineering courses, applied Matlab in Thesis  
Key Courses: Advanced Options Theory, Fixed Income, Risk Management

**MA Economics**  
2000 – 2003

**Jesus College, University of Cambridge, Cambridge CB5 8BL**

High Upper 2<sup>nd</sup> (Hons.), included Maths, Econometrics and Finance courses  
Top mark in the year in Financial Econometrics Exam (final year)

**Secondary School**  
1994-1999

**St. Paul's School, Lonsdale Road, London SW13 9JT**

A-Levels: Maths (A), Further Maths (A), Physics (A), Economics (A)  
AS-Levels: French: A A/O-Levels: French: A  
GCSEs: 9 A\*s (including Maths, Physics and History), 2 As (English and English Literature)

## PUBLICATIONS

Zikes, F., Barunik, J., & Shenai, N. (2014).

“Modeling and Forecasting Persistent Financial Durations”. *Econometric Reviews* – available [here](#)

## AWARDS / ACHIEVEMENTS

### **Programming:**

Hackerrank.com: Rank 1 for C++, Python, Java, SQL (top 4000 out of 1.4M programmers)  
Profile: link [here](#)

### **Trading:**

Received interest from Wiley & Sons Publishers for a book and course deal  
Lead of London Systematic Traders meetup group (link [here](#))

### **Training / Tutoring:**

Inaugural Award for “Top Tutor” at The Profs, Private University Tutors (1<sup>st</sup> out of 400 active tutors)

### **Imperial (PhD):**

Awarded ESRC Studentship at Imperial (only 2 available)

### **Imperial (MSc):**

Award for “Best Technical Thesis” for implementation of Fast Fourier Transforms for Options Pricing

### **Cambridge:**

Scholarship in final year (top 10 out of 170 in penultimate year exams)

### **Accenture:**

Sponsorship throughout undergraduate degree

### **St. Paul's:**

Top Scholarship throughout (170 candidates)

## PERSONAL

Nationality: British Gender: Male

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## CAREER HISTORY

<p><b><i>THE INSTITUTE OF QUANTITATIVE TECHNOLOGY (THE IQT)</i></b> <i>2020 to date</i></p> <p>BUSINESS AREA:</p> <p>QUANTITATIVE PRODUCTS</p>	<ul style="list-style-type: none"><li>• Founder &amp; CEO</li><li>• A new initiative of E K Technologies dedicated to Products for Algorithmic Trading, AI and Data Science. Website: <a href="http://www.theiqt.com">www.theiqt.com</a></li><li>• Key offering: IQT Advantage: a software library designed to simplify and extend algorithmic trading in MetaTrader 4.</li><li>• Consulting, Workshops and Courses are also available for supporting IQT Advantage.</li></ul>																						
<p><b><i>E K TECHNOLOGIES</i></b> <i>2012 to date</i></p> <p>BUSINESS AREA:</p> <p>QUANTITATIVE CONSULTING</p>	<ul style="list-style-type: none"><li>• Founder &amp; CEO</li><li>• Software for Trading and Data Science. Website: <a href="http://www.eekaytee.com">www.eekaytee.com</a> Client feedback is on the “Testimonials” page of my website: link <a href="#">here</a></li><li>• Highlight: Built a Platform for trading and data collection for Cryptocurrency APIs (summary <a href="#">here</a>) Using Java and JavaScript, REST and Streaming services, and OOP / OOD concepts. Features: Multithreading, Automated Trading across 6 exchanges accounting for market depths across assets (Bitcoin and other cryptocurrencies e.g. Ether)</li><li>• Selected Past Projects (indent shows programming languages used): <table data-bbox="430 926 1437 1199"><tr><td>Data Aggregation (Sports)</td><td>Python, JavaScript</td></tr><tr><td>Pattern Recognition Trading Strategy (FX)</td><td>Python, MQL4</td></tr><tr><td>Long / Short Memory Trading Strategy (FX)</td><td>MQL4</td></tr><tr><td>Wavelet Analysis Trading Strategy (Futures)</td><td>R, TradeStation, MQL4</td></tr><tr><td>Cointegration Analysis for Pairs Trading (Stocks, Commodities)</td><td>Matlab</td></tr><tr><td>Renko Bar Trading using JForex (FX, Indices, Commodities)</td><td>JForex</td></tr><tr><td>Economic Calendar Scraper for generating News Indicators (FX)</td><td>MQL4</td></tr><tr><td>Backtesting using MeX to call C++ from Matlab (FX)</td><td>Matlab, C++, MySQL</td></tr><tr><td>Trading and Data Collection using the Betfair API (Tennis)</td><td>Matlab, XML, C#, Excel</td></tr></table></li><li>• Selected Past Clients: Rishi Gohill, Gohill Trading (<a href="http://gohilltrading.co.uk/">http://gohilltrading.co.uk/</a>) Joe Branco, Forex Living (<a href="http://www.forex-living.com">http://www.forex-living.com</a>) Vedanta Trading Limited (<a href="http://www.masterthemarkets.net">http://www.masterthemarkets.net</a>) Professor Paolo Zaffaroni, Former Head of Finance Group, Imperial College Business School</li><li>• Future Projects: <table data-bbox="430 1499 1421 1556"><tr><td>ARFIMA Signals applying the Kalman Filter</td><td>MQL4, Python, Matlab</td></tr><tr><td>Support Vector Machine Trading Strategy</td><td>MQL4, Python, Matlab</td></tr></table></li><li>• Courses: Artificial Intelligence Techniques for Traders (Ernest Chan): SVMs, Random Forests Machine Learning (Andrew Ng): Neural Networks, Recommender Systems Statistical Learning (Hastie et al.): PCA, Clustering</li></ul>	Data Aggregation (Sports)	Python, JavaScript	Pattern Recognition Trading Strategy (FX)	Python, MQL4	Long / Short Memory Trading Strategy (FX)	MQL4	Wavelet Analysis Trading Strategy (Futures)	R, TradeStation, MQL4	Cointegration Analysis for Pairs Trading (Stocks, Commodities)	Matlab	Renko Bar Trading using JForex (FX, Indices, Commodities)	JForex	Economic Calendar Scraper for generating News Indicators (FX)	MQL4	Backtesting using MeX to call C++ from Matlab (FX)	Matlab, C++, MySQL	Trading and Data Collection using the Betfair API (Tennis)	Matlab, XML, C#, Excel	ARFIMA Signals applying the Kalman Filter	MQL4, Python, Matlab	Support Vector Machine Trading Strategy	MQL4, Python, Matlab
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<p><b>THE PROFS</b> (Tutoring Agency) 2014 to 2020</p> <p>BUSINESS AREA:  QUANTITATIVE TRAINING</p>	<ul style="list-style-type: none"><li>• Quantitative Consultant working with professionals, postgraduates and undergraduates in the areas of Programming, Data Science, Statistics, Econometrics, Mathematics and Finance at The Profs, Private University Tutors: <a href="https://www.theprofs.co.uk/">https://www.theprofs.co.uk/</a> The Guardian Newspaper Start Up of the Year Finalist in 2016.</li><li>• Inaugural Top Tutor award in 2016. 1000+ Sessions, 80+ Clients. Strong results have been achieved by clients, visible on the “Testimonials” page of the E K Technologies website: link <a href="#">here</a></li><li>• Highlight: Assisted Global Head of Conduct at HSBC with Artificial Intelligence MSc courses:<ol style="list-style-type: none"><li>1) C++ and Matlab programming for a self-driving robot, she received a mark of 70%. Video <a href="#">here</a> (C++ 2-4-2 MLP Neural Network with tanh Activation Functions)</li><li>2) Mathematical preparation for Robotics and Neural Networks exams, she received marks of 75% for both</li></ol></li><li>• Selected Client Backgrounds with numbers in brackets: Professional (30), LSE (19), City University / CASS (13), King’s College London (6), UCL (7), Cambridge (2), LBS (1)</li></ul>
<p><b>ACCENTURE</b> 2004 – 2007 (<i>graduate</i>) 2001 (<i>internship</i>) 1999 – 2000 (<i>gap year</i>)</p> <p>BUSINESS AREA:  MANAGEMENT AND IT CONSULTING</p>	<ul style="list-style-type: none"><li>• Promoted to Consultant / Associate at the first opportunity</li><li>• Sponsored throughout university based on Gap Year performance (1999-2000) Gained strong feedback on Internship (2001) leading to graduate job offer (2003)</li><li>• Technologies: SQL, Business Objects Designer and Reports Developer (tools for automating queries and presenting reports), Business Objects Data Integrator (ETL tool), AutoIt</li><li>• Areas of work:<ul style="list-style-type: none"><li>- Business Intelligence (data warehousing, database management, reporting software)</li><li>- Finance &amp; Performance Management (business process analysis and design)</li><li>- Change Management (training)</li><li>- SAP (support of user transaction systems)</li></ul></li><li>• Client contact:<ul style="list-style-type: none"><li>- Gained strong client feedback throughout (Warner Bros., Sky and BAE Systems)</li><li>- Usually worked towards challenging deadlines as part of an Accenture team at the client site, in final project acted as sole representative of Accenture at the client site</li><li>- Developed, deployed, led user acceptance and provided live support for Business Intelligence software reports for global Finance and Sales departments (for employees up to Director level)</li><li>- Directed onsite training and development of user training manuals for Warner Bros. Italy</li><li>- Client company sectors: Media &amp; Entertainment, Aerospace &amp; Defence</li></ul></li><li>• Consulting Project Lifecycle phases: Requirements, Analysis, Design, Build, Deploy, Support</li><li>• Software Development Lifecycle phases: Design, Build, Test, Deploy, Support</li><li>• Courses: SQL, Dimensional Modelling (Ralph Kimball), ETL and Reporting (Business Objects), Consulting, Process Design</li></ul>