

# Misrab M. Faizullah-Khan

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[misrab.me](http://misrab.me)

## EDUCATION

2008-2013 **STANFORD UNIVERSITY**

*M.S. Management Science & Engineering: Artificial Intelligence*

*B.A. Economics, Minor Computer Science*

2004-2006 **UNITED WORLD COLLEGE OF SOUTH EAST ASIA**

*International Baccalaureate (IB) Diploma*

- Total score: 44/45

- Extra subject: Further Mathematics

- National Youth Achievement Award, Economist of the Year, Journalist of the Year

## COURSEWORK & LEARNING

|             |   |
|-------------|---|
| Technical   | Machine Learning, Databases, Convex Optimisation, Computer Networking   |
| Operations  | Technology Strategy, Accounting, Operations Research  |
| Independent | Topology ( <i>Essential Topology</i> ), Quantum Computation ( <i>Vazirani, UC Berkeley</i> ), Statistical Learning Theory ( <i>Hastie, Tibshirani, Stanford</i> ), Cell Biology and Genetics (including time in Imperial College's Postgraduate course) |
| Projects    | Neural network that identified spoken languages; Youtube channel ranking system; Online auction mechanism design and more   |

## SKILLS

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|-------------|--|
| Programming | Proficient in C, C++, Java, Go, Python, Javascript, Ruby   |
| Mobile/Web  | iOS, HTML, CSS, Ruby on Rails, Node, Angular, Backbone, d3   |
| Databases   | Hands-on experience with SQL, MongoDB, Hadoop, Hive, TitanDB   |
| Languages   | Written and spoken English, French (native), Mandarin, Urdu, Hindi, Italian (advanced), Turkish, Portuguese, Arabic (intermediate) |
| Interests   | Classical and jazz guitar, piano, long-distance running, garage engineering, modern history  |

## WORK

- May '15–present **CLIENT & BIG DATA**, *Senior Optimisation Specialist & Data Scientist*, TRIPADVISOR, Singapore
- Highly technical client-facing role. Work in small distributed team on some of the toughest data and auction related challenges at TripAdvisor
  - Optimise clients' bidding strategies on the advertising auction. Design, implement and maintain scalable big data infrastructure for high internal and external impact
- Jan–Apr '16 **DATA SCIENCE TEACHING**, *Data Science Instructor*, GENERAL ASSEMBLY, Singapore
- Taught a part-time data science course to about a dozen adult professionals alongside a Teaching Assistant
  - Official Net Promoter Score of 90 (Beyond "Excellent")
  - Topics included: K-Nearest Neighbours, Naïve Bayes, Regularisation, Logistic Regression, K-Means Clustering, Ensemble Techniques, Decision Trees and Random Forests, SVMs, Dimensionality Reduction, Recommendation Systems, Database Technologies, Network Analysis
- April '15 **PROJECT CONTRACT**, *Data Engineer*, NUGIT, Singapore
- Built an NLP agent on Slack that could respond to plain-English user queries, interactively. "Nugbot" would parse natural language, issue complex asynchronous API requests, and respond appropriately
- Jun–Sep '14 **BIG DATA**, *Data Scientist*, VISA LABS, Singapore
- Helped maintain a pipeline of prototypes leveraging emerging technologies. Hands-on experience with major big data tools ranging from Spark to d3.js visualisation
  - Worked in a team of almost exclusively PhDs, from whom I learnt tremendous amounts
  - Planned and ran daily analytics on terabytes of data
- Sep–Mar '14 **CONVEX OPTIMISATION**, *Programmer*, STANFORD ENGINEERING
- Had the honour of working under Prof. Stephen Boyd, contributing to the development of a python version of the 'cvx' convex optimisation library
- Aug–Nov '13 **ENTREPRENEURSHIP**, *Co-Creator*, NEUROSPLASH
- Hand-wrote 30k+ lines of Node.js running on top of MongoDB and SQL for an online educational platform. Worked in amazing team of four
- Sep–Dec '12 **TEACHING**, *Teaching Assistant*, STANFORD AARC CENTRE
- Tutored student athletes on intermediate game theory and microeconomics
- Jul–Aug '12 **FINANCIAL MODELLING**, *Data Analyst*, GOV. OF SINGAPORE INVESTMENT CORP (GIC)
- Constructed software financial models for the Australian real-estate market

- Jul–Aug '10 **MANAGEMENT**, *Apprentice*, SHAH AND TANAH GROUP, Mumbai India
- Rotated through Sales, Accounting and Operations departments of a Mumbai-based industrial infrastructure provider
  - Produced capstone project with recommendation for improving the effectiveness of each department. Enhanced cash flow by 16%
- 2006–2008 **MILITARY SERVICE**, *Frontline Officer*, SINGAPORE POLICE FORCE
- Operated in high-stress environments including domestic violence, disputes and emergency incidents
  - Presented the Outstanding Contribution Award for excellent service
- Jul–Aug '06 **ACCOUNTING**, *Accounts Auditor*, ROBERT YAM AND CO, Singapore
- Audited clients' accounts by verifying reported figures against financial statements. Gained familiarity with technical commercial documents
- Jun–Jul '06 **PRIVATE EQUITY**, *Research Assistant*, PORTELET ASIA, Singapore
- Independently produced a research paper on the water purification industry in Asia

## LEADERSHIP ROLES & ACTIVITIES

- 2009–2011 **SOCIAL ENTREPRENEURSHIP**, *Founder*, SC-ASIAN FORUM FOR EDUCATION
- Spearheaded a student-run organisation that promotes learning about education policy. 20 active members plus quarterly conferences of more than 100 people
- 2008–2011 **TRADING**, *Director*, BLYTH FUND
- Lead a US\$140k+ fund at Stanford University. Routinely assessed investment opportunities and executed trades
- 2006–2008 **COMPETITIVE SPORT**, *National Player*, SINGAPORE POLO TEAM
- Our team achieved the Silver Medal at the 24th South East Asian (SEA) Games
- 2004–2006 **JOURNALISM**, *Editor in Chief*, MONEY MATTERS MAGAZINE
- Produced first profitable issue of school Economics magazine ever. Circulation of 2000+ individuals
- 2004–2006 **VOLUNTEER WORK**, *Chairman*, JAKARTA STREET KIDS
- Managed and organised 50+ volunteers in raising awareness and funds for two schools and one orphanage in Jakarta
  - Identified transparency as key barrier to donations, addressed this issue through detailing money paths