Artificial Intelligence in Finance

at

Hong Kong University of Science and Technology

---- Katrina Fong

KATRINA FONG'S PROFILE



www.linkedin.com/in/katrinafong





















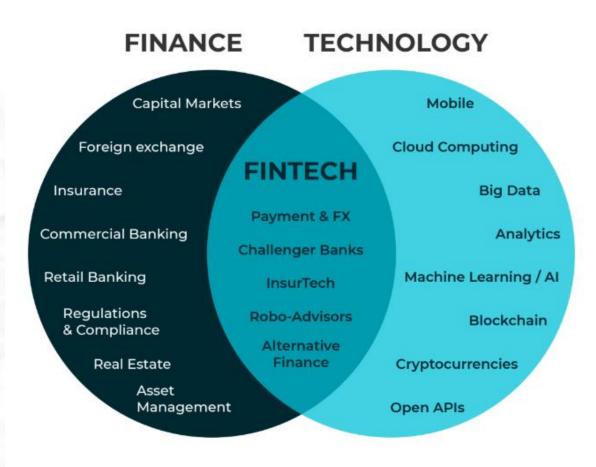




- Katrina is a FinTech specialized recruitment consultant from Hays Recruitment with a history of building successful working relationships with exceptional clients across the FinTech space in AI, Machine Learning, Crypto & Blockchain, Payment, Virtual Bank, Digital Transformation, Robo Advisory etc.
- She also awrded a Teaching Certificate in Higher Education from Harvard, The Derek Bok Centre
 for teaching and learning, and she has been practicing as Teaching Assistant at TheChineset
 University of Hong Kong, and Guest Lecturer at Hong Kong University of Science and Technology.
- She has played key roles in building the technology teams for Virtual Banks, HSBC (PayMe & Jasmine FinTech), Standard Charted Bank (Virtual Banking), Hang Seng Bank (Digital Transformation via Chatbots and AI), DBS Innovation Hub, Bank of East Asia, Tencent, Alipay, Blue (first digital life insurer by Aviva and Tencent), Alipay, Accenture, KPMG, Deloitte Digital, PricewaterhouseCoopers, and leading FinTech start-ups such as WeLend, Privé Technologies, MioTech etc.
- Prior to recruitment, Katrina used to be a serial entrepreneur in Education Consulting as well as EF
 Education as Course Leader in United States & United Kingdom.

Background on global FinTech trend and various vertical segments

 FinTech accelerates change and disruption due to technological innovation such as Blockchain, AI/Machine Learning, Big Data Analysis, and Cloud Computing

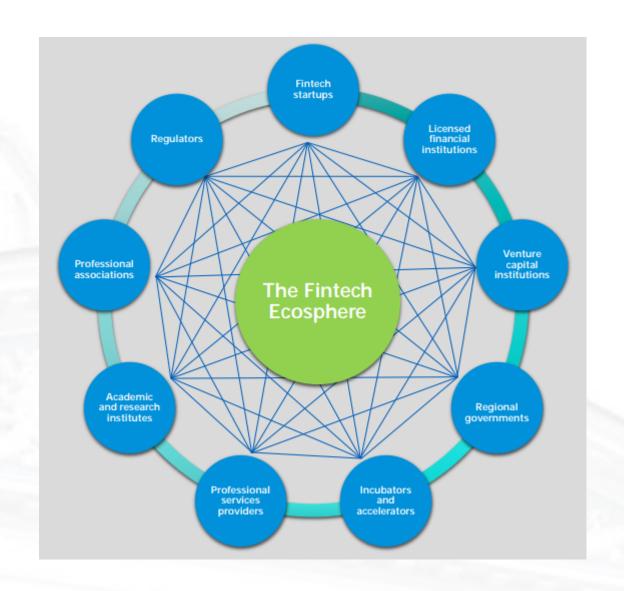


Source: CBInsights & Cryptoslate 2018

What does the Fintech landscape look like?

Major sectors of Fintech

- Payment processing/Networks
- Mobile wallet/Remittance
- Personal finance management
- Wealth management
- Regtech
- Insurtech
- Credit scoring
- Alternative lending
- Digital banking
- Accounting/Tax
- Banking infrastructure
- Blockchain
- Cryptocurrency

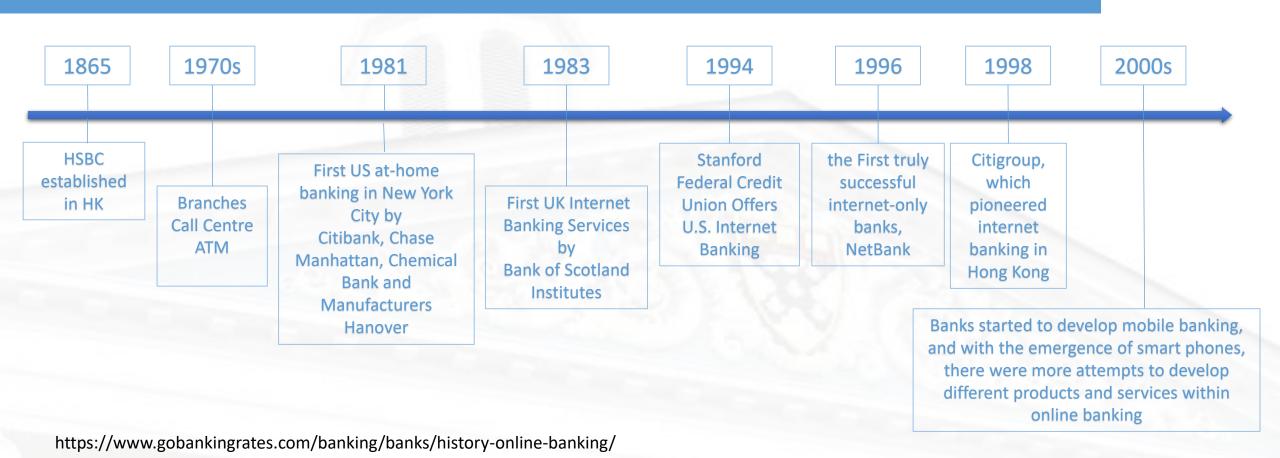


Differentiate traditional & virtual banking

- What is traditional (online) banking?
 - The online banking definition, or net banking definition, includes any electronic payment system that allows customers of a financial institution to conduct financial transactions through the financial institution's internet-enabled wesite or app.

- What is virtual banking?
 - Also called challenging bank (UK), Neobank
 - Founders could be non-banking, entrepreneur
 - Mobile-first business model
 - Some are evolved from Fintech company

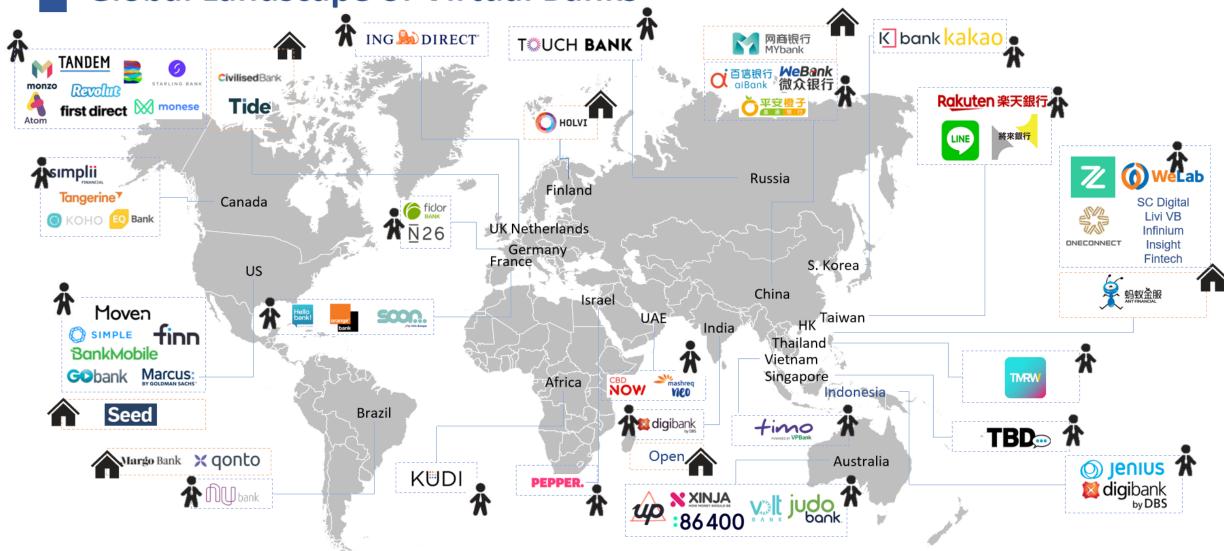
The History of traditional online banking







Global Landscape of Virtual Banks



More innovation labs were established to keep apace with Fintech

Identification

Facial identification



PFM

 Financial management tool

• Credit improvement

Extracted examples



Blockchain

- Risk Management
- Data transformation
- Insurance







Payment technology

- Payment app
- Contactless **Payment**







Big Data & Al

- Credit data modeling
- Data analytics solution



Rabobank





TransUnion



- Hackathon competition
- Internal innovative solution center













NLP & robotics

· Chatbot to revolutionize customer service



Synechron





 Investment & partnership with startups for fintech solutions





Wearable

- AI\VR\Wearable tech in stress testing
- Wearable contactless payment





Strategy

· Research on fintech trends and technologies



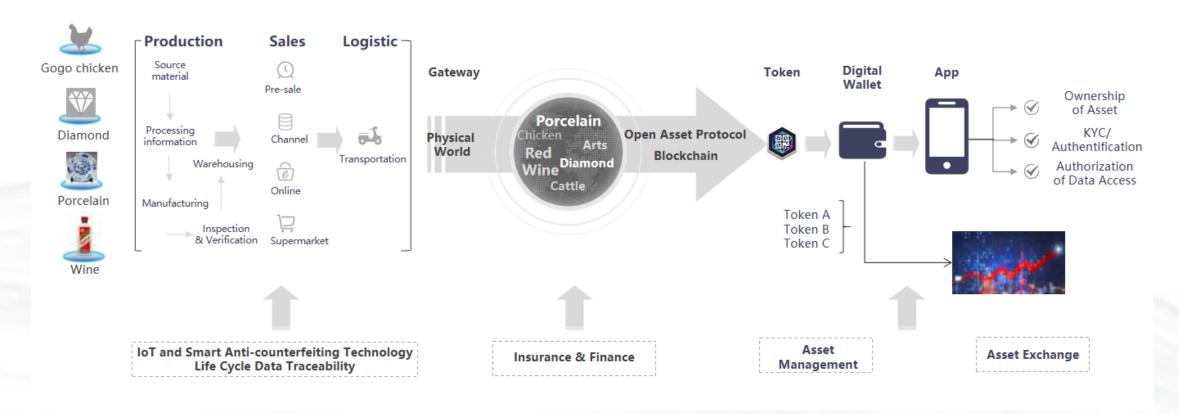






Overview of Blockchain Application

Distributed, decentralized, public ledger.



Source: Accenture; McKinsey

Impacts of Covid-19 on Job Market

- General slow down of hiring across all industries
- Finance big corporates cutting down costs, small startups struggle with funding
- Non-Finance retail industry is not doing well
- FinTech projects are still running and hiring if they have already secured funding previously
- Top skills for New Hires in Tech industry in HK:
 - 1. Cantonese
 - 2. JavaScrpit
 - 3. Java
 - 4. Python
 - 5. Node.js

Impacts of Covid-19 on Fintech Industry

- 2020 will be challenging for FinTechs to navigate, but there are better times ahead.
- The uncertainty of the current situation puts pressure on fundraising, cash management, marketing and staff management.
- Expect crisis mode until Q3 2020, followed by a 12 18-month recovery
- Digital-only becomes the new industry norm in financial services
- Financial Institutions turn to Tech companies rather than in-house solutions to accelerate digital transformation

Impacts of Covid-19 on Fintech Industry

- FinTech sector winners:
 - Consumer and SME lending platforms: best-adapting mechanism to swiftly and efficiently deliver capital to key segments of the economy
 - Mortgage and life insurance digitalization: leaping forward with technology to disrupt the role of intermediaries, whose role was often face-to-face
- FinTech 'enablers' around AI, IoT and software solutions are in high demand:
 - AI: bots for call-centers; account-opening procedures; loan automation,
 - KYC: increased need for safe digital ID given volume of digital business transacted and robust solutions required for protection of client assets
- Areas under pressure:
 - Challenger banks: high valuations, High burn and lower expected activity post-crisis
 - Wealth management: client de-risking and lower AUMs impacting bottom line
 - Payments/FX: decreased transaction activity affecting commission businesses



Remote working

Career _

Recruiting •

Leadership

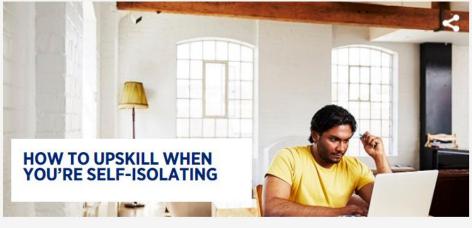
HR ▼ Industry ↓ Insights

Hays Journal Culture, Diversity & Inclusion

Podcasts ▼

LATEST CAREERS & WORKPLACE ADVICE















CV Writing

- CV/Curriculum Vitae, or resume, should be clear, concise, complete, and up-to-date with current employment and educational information.
- Key Components :
 - Personal details and contact information
 - Education and qualifications
 - Work experience/employment history
 - Skills. (computer skills, language skills, and any other relevant skills)
 - Training / Graduate Fieldwork / Study Abroad
 - Research experience
 - Teaching experience
 - Publications
 - Grants, scholarships, fellowships, and assistantships
 - Awards and honors
 - Professional licenses, certifications, and memberships

Good example:

Jason CHAN Example

1/F A, No.161, Mid Levels,

HollywoordRoad, Central, HongKong +8526xxxxxxx:jasonchan@example.com

Linkedin.com/in/xxxxx

SUMMARY

- · A highly motivated individual blah blah blah
- who would like to pursue a career in the direction of blah blah blah...

EDUCATION BACKGROUND

XXXX University

Sep 2018 - Present

(Expected to graduate in July 2019)

MS In Financial Mathematics

 Coursework: Derivative Pricing, Stochastic Calculus, C++ Programming, Python, Java Application, Time Series

XXXX University

Sep 2013 - Jul 2017

BSIn Financial Mathematics

 Coursework: Derivative Pricing, Stochastic Calculus, C++ Programming, Python, Java Application, Time Series

WORKING EXPERIENCES

Quant Asset Management - Hong Kong

Sep 2018 - Dec 2018

Winter Intern of Trading Strategy & Software Developer

- Converted 5 day trading strategies from papers mainly related to order ow, market micro-structure
 and machine learning into real-business, fixed them by creating unique parameters in stock market
- Individually designed a tick-level system to back-test and suggest combination of trading strategies by quantitative analysis
- Optimized data grasping and transaction managing by in-house tools referred API from popular brokers

OTHER EXPERIENCES

Inter-University ALGO Trading Contest

Jan 2014 - Oct 2016

 Selected from hundreds of initial teams as finalist to develop an algorithmic trading strategy on XXX with 25% annualized returns. Achieved 4th highest return in the final contest

JP Morgan - Hong Kong

May 2014 - Aug 2015

Curve Construction and Theta Noise Project

- · Curve builder: bootstrapped forward curve with linear and cubic interpolation
- Risk decomposition analysis: Analyzed impact of slide risk, theta noise, accrual risk for bond traders

SKILLS & INTERESTS

Language: Trilingual proficiency in English, Cantonese, and Mandarin Chinese

Technical Skills: Python, C++, R, VBA, SOL, JAVA, Matlab, C# Interests: Yoga, Hiking, Traveling, Music (Grade 8 Piano)

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14 WAYS TO ENSURE YOUR SKYPE INTERVIEW IS A SUCCESS



Rowan O Grady President, Hays Canada

- 1. Establish a Skype interview appropriate environment
- 2. Learn about all the tools Skype has to offer
- 3. Do a test Skype call the day before the interview
- 4. Practise speaking your interview answers out loud and record yourself
- 5. Make sure your Skype account is professional
- 6. Have notes and questions prepared
- 7. Log in and get set up ahead of time
- 8. Dress for success
- 9. Set your Skype presence status
- 10. Body language is crucial even through the lens
- 11. Be engaged when the interviewer is talking
- 12. Be aware of any time lag
- 13. Stay calm if the technology goes wrong
- 14. Follow up after the call

Interview Preparation

- Self-introduction (20-30 seconds elevator pitch)
- Past relevant project experiences summary & details
- Technial questions Quant interview example questions would cover Maths,
 Statistics, Programming, Finance, and Brain Teaser Qns
- HR questions Career goals, understanding on the company and the role; why this opportunity and how can this opportunity matches your goal, how can you fit into the role.
- Behavioral & Hypothetical questions
- Q&A Questions to ask the interviewer

Typical Technical Quant Questions:

- General Maths, Linear Algebra, Probability
- Programming, OOP, Python, C++
- Finance, Options, Risk Management, Fixed Incomes etc
- Brain Teasers

