HANXIANG (HENRY) PAN

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EDUCATION

University of Western Ontario (UWO) | London, Canada   2014 – 2016
Bachelor of Science, Honors Specialization in Computer Science Minor in Economics
- Relevant Coursework: Analysis of Algorithms, Artificial Intelligence, Computer Architecture, Human-Computer Interaction, Object-Oriented Design and Analysis
- Thesis: Enhancing Food Image Recognition for Nutrition Analysis

Ivey Business School, University of Western Ontario | London, Canada   2011 – 2014
(Discontinued) Bachelor of Arts, Honors Business Administration (HBA)
- Completed first two years of Specialization in Economics program, and third year in the HBA program

WORK EXPERIENCE

Paymentus | Toronto, Canada   November 2017 – August 2018
Application Engineer (Team Lead)
- Designed and implemented generic UI form components in React and API/microservices in Node.js for the biller self-onboarding feature
- Designed the first end-to-end (E2E) testing framework and implemented core libraries for developing data-driven tests in Node.js and containerized the testing environment in Docker for the Continuous Integration (CI) pipeline
- Analyzed 100+ application feature flows for over 1000+ generic and custom billers with emphasis on complexity and reusability to identify areas for component testing and to create backlogs for E2E tests
- Led the automation test engineering team scrum meetings, planned backlog stories based on regular retrospectives with the team and major stakeholders and provided mentorships for other engineers

Citigroup | Toronto, Canada   June 2016 – November 2017
Software Developer / Technology Analyst

Portfolio Risk Management (PRISM) Application Team
- Redesigned and implemented a new service to run synchronization tasks in parallel to sync in-memory KDB tables with the archive DB on intraday equity data, reducing task runtime by 30%

Velocity Desktop Trading Application Team
- Implemented server-side search features for all Interest Rate Swaps (IRS), Bonds and internal financial products
- Investigated and implemented the cache architectural change from a peer-to-peer (P2P) model to an efficient Client-Server model, reduced component startup-time and latency by 9X and mitigated deadlocks
- Added support for 200+ non-benchmark IRS to the order management component for Request for Quote (RFQ)
- Migrated a legacy data source for 300+ IRS products by redesigning field mappings and by implementing reference data enhancement actions to support consistent order flow for downstream components

Bell Canada | Toronto, Canada   Summer 2015
Business Intelligence Analyst
- Reallocated technicians to different job types based on performance quartiles, which reduced monthly churn rate for the Internet and Home-phone channels by 29% and 17%, respectively
- Reduced external noise and statistical bias (multicollinearity) using regression and statistical adjustments to determine true drivers for field-related churn, ultimately used as reports for field managers
- Modeled workload distribution to determine the feasibility of "Same-day/Next-day" repair service offering and cutoff time, reducing miss-commitments by 54 tickets per day

Deloitte (Consulting Practice) | Toronto, Canada   Summer 2014
Business Technology Analyst

- Implemented SAP system enhancements and developed user acceptance tests for 10 client requests
- Performed vendor analysis, market research, and client scans to develop the firm's Sourcing and Procurement practice capabilities in Canada
- Revamped a VBA internal visualization tool to analyze and develop practitioners' brand within the firm

McKinsey & Company | Beijing, China   Summer 2013
Part-Time Assistant

- Analyzed performance management data and delivered 30+ 360-degree analysis PowerPoint decks to the client
- Organized the Capability for Performance (C4P) event through client research and logistical planning which resulted in an attendance of 50+ companies

PROJECTS & RESEARCH

Food Image Recognition Thesis   University of Western Ontario

- Surveyed various image data normalization and feature extraction techniques including edge detection, bag of features, and Convolutional Neural Networks (CNN) to improve overall image recognition accuracy
- Achieved a 10-class image classification top-1 error of 1.93% using CNN and Support Vector Machine (SVM) with cross-validation and parameter-tuning

HackerNews Post Tagger   Personal Project

- Implemented a full Natural Language Processing (NLP) pipeline including data-cleansing, parameter-tuning, and post-tagging using Latent Dirichlet Allocation (LDA) in Python
- Evaluated Reddit's dataset as a transfer learning opportunity for supervised learning using subreddits as tags
- Designed and implemented the user interface, REST APIs for data retrieval and distributed messaging between the web server and Python services that are used for computational-intensive operations

Cryptocurrency Trading Bot   Personal Project

- Designed the architecture and implemented all components including WebSocket data streaming from Bitfinex/ Binance Exchange, algorithmic trading based on technical indicators, ticker-price/candlestick/orderbook data processors, DB operators, and back-testers from scratch using Node.js
- Achieved a rate of return of 42.23% over the span of 16 days with an average of 9.6 trades/day which was 7% above the buy-and-hold baseline
- Designed and implemented a trade visualization tool to assist back-testing of trading strategies using React.js

Stock Trading Simulator   Personal Project

- Designed and implemented the user interface, REST APIs, and 6 scalable database schemas/tables to support portfolio management, user authentication, transaction analysis in PostgreSQL

Configuration Management Tool   Citi

- Implemented an Electron-based fully functional editor, and a mini lookup tool where selecting, finding, and filtering properties are all done through one centralized search bar using React.js and HTML5

AWARDS

Rising Star - Outstanding Performance on the Velocity Desktop Application Team (1/20)   Citi | 2017
1st Place at 18th Boston Consulting Group Ivey HBA Case Competition (1/80)   Ivey Business School | 2013
Dean's Honor List   University of Western Ontario| 2012/2013/2015/2016
Western Scholarship of Distinction   University of Western Ontario| 2011

SKILLS

Languages:	Java, JavaScript, Python, MATLAB, SQL, Bash, Pug/Jade, Freemarker, HTML5, VBA
Framework/Libraries:	Spring, Node, React, Express, Puppeteer, Jest, Mocha, Chai
Tools:	Git, Docker, Nginx, Gradle, NPM, Jenkins, ELK, Sonar, TeamCity, uDeploy, JIRA, Excel