

Dhrumil Barot

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SKILLS

Deep Learning
Natural Language Processing
Data Science & Analytics
Data Visualization
Algorithmic Trading
Product Design

TECHNOLOGIES

LANGUAGES

Python • Java • C • C++ • R • SQL
JavaScript • HTML/CSS • NodeJS

MACHINE LEARNING

TensorFlow/TensorBoard • sklearn
Keras • XGBoost • NLTK • spaCy

DATA ANALYSIS

Pandas • Numpy • BeautifulSoup
matplotlib • plotly • ReportLab

TRADING

TA-Lib • Quantopian • Zipline • Stats

SYSTEMS

PC • Linux • UNIX • Bash • Git

AWARDS

Top 10 TechCrunch Disrupt SF
1st/1000 Hack the North (Finalist)
1st/500 SAGE Internationals
1st/42 JACO VP Technology
2nd/150 Facebook Pitch @ HTN

EDUCATION

WESTERN UNIVERSITY & IVEY BUSINESS SCHOOL

BS - Computer Science
HBA - Business Administration
Expected May 2021 | London, ON
cGPA: 3.9 / 4.0

COURSES

Data Structures & Algorithms
Software Engineering
Machine Learning (Stanford)
Deep Learning (Google)

ACTIVITIES

Photography
Competitive Eating
Trading & Investing
Urban Exploration

EXPERIENCE

OPTRUST | Analyst Intern

May 2018 - September 2018 | Toronto, ON

- Developed algorithmic trading models leveraging LSTM, RNN & GRU in **TensorFlow**, and boosted trees in **XGBoost** – generated a **9.32% CAGR**
- Saved team **\$64K/year** by automating reporting of a **\$7bn** portfolio via uploads through SFTP & processing through ETL in **Python, Bash & SQL**
- Researched trading strategies involving satellite imagery analyses with **CNN** architectures such as U-Net and ResNet in **TensorFlow** and **Keras**
- Optimized scripts to aggregate and clean data from various sources and normalise outputs, cutting runtime of Python processing library by **12x**

WESTERN UNIVERSITY | Machine Learning Researcher

September 2018 - Present | London, ON

- Worked under Professor Jan Cami to discover compounds in interstellar gas clouds, based on molecular spectroscopy data from deep sky images
- Implemented **Bayesian Neural Net** & **Gaussian Processes** in **Edward** & **TensorFlow** to classify chemical materials bands with **>97.5% accuracy**
- Trained models on the **SHARCNet** – Canada's largest research network

SITTO | Co-founder, CEO

November 2015 - January 2017 | Toronto, ON

- Created babysitting app; **150+** users and **\$1K** processed in first month
- Designed app in **JavaScript, Python** & **SQL** and implemented **Stripe API**
- Reduced hosting costs over **6x** by transitioning from **AWSEC2** to **Azure**
- Offered **\$15K USD** from TuSTARS in Chengdu, China at **\$30K valuation**

PROJECTS

OURBLOCK 🔗 | Python / AWS / Solidity / Node / D3

- **Community safety app** connecting civilians and police to simplify crime reporting process, leveraging **deep learning** and a **distributed network**
- Implemented classification & ranking model with **NLTK** & convolutional neural networks in **TensorFlow**, achieving **>97.8% accuracy** on test sets
- Applied **AWS Lambda, GMaps** & **RethinkDB** for **real-time** data sharing
- Pitched iOS & web applications at **TechCrunch Disrupt 18** to thousands

PINPOINTR 🔗 | JavaScript / Python

- **Indoor location tracking** via machine learning & physics (Doppler Shift/ Triangulation/Kalman Filter) through emission of **ultrasonic frequencies**
- Used **JavaScript** for Facebook Login to collect users' demographics data

STEGANOFY 🔗 | Python

- **Digital signature app** embedding **256-bit keys** at a pixel-level in photos
- Employed **MEAN** stack to allow users to create accounts & custom keys

LEADERSHIP

MUSTANG CAPITAL | Quantitative Analyst

November 2017 - Present

- Managed North American equities portfolio, representing **70% of AUM**
- Executed Momentum and Value ARP strategies, generating **3.7% return**
- Valued companies with **financial models** (DCF & NAV) and comparables
- Decreased technical analysis library **compilation time** by **>120x** using **C**