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 &GRU* networks in **TensorFlow**, and boosted tree in **XGBoost** – generated **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 Networks* & *Gaussian Processes* in **Edward** & **TensorFlow** to classify chemical material bands at **> 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 models 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**