NICOLAE STRONCEA

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EDUCATION / COURSES

HB.Sc Specialist in Computer Science, Focus in Artificial Intelligence, Minor in Statistics

📅 09/2017 – 04/2022   📍 University Of Toronto

- **GPA**: 3.66/4.0

RELEVANT EXPERIENCE

Backend Developer at Shopify

📅 05/2021-08/2021

- Developed proof of concept Ruby package which parallelizes GraphQL queries
- Designed (with team) the GraphQL API for one of the 10 mission-critical projects for 2021.

AI Engineer at Royal Bank of Canada

📅 05/2020-05/2021

- Developed a simulation where Reinforcement Learning Agents trade against each other to measure relative performance.
- Developed analysis scripts which efficiently analyse millions of rows of data and output thorough reports.
- Worked on improving performance of Deep Reinforcement Learning algorithms which trade millions of shares daily.
- Collaborating with traders and subject matter experts across the trade floor.

Database Developer at Victoria College

📅 09/2018-04/2020

- **First year:** Used Java and JDBC to automate more than 50% of work-flow for a large task (40 hours).
- **Second year:** Rewrote project with a React front-end and Flask back-end, deployed with Docker.
  - Increased performance by more than 40% using Redis, client and server caching, pagination.
  - Increased security by using JWT authentication, password hashing, SSL.

Simulation Developer for Vector Institute of AI

📅 09/2019-12/2019

- Used Python to design backend of efficient, scalable Emergency Room Simulation that is used to test performance of resource-allocation ML algorithms in an ER environment.
- Architecture ran with $O(logn)$ time complexity, allowing flow modelling of 20k+ patients on a regular CPU.
- Used OOP principles to create a flexible and extensible architecture that can be easily repurposed to other resource-allocation environments.

SKILLS

- *Languages*: Python, JavaScript, Ruby, Java, C, Android Development.
- *ML Frameworks*: Pytorch, Numpy, Scikit-learn, Pandas.
- *Databases*: SQLite, PostgreSQL, Redis, Cassandra.
- *Front-End*: HTML & CSS, Vue.js, React.

PERSONAL PROJECTS

Top 5 Contributor to ActivityWatch, Open Source Time Tracking software

- Used Python, JavaScript, Kotlin, VueJS to implement most requested features for project with 50k+ downloads.
- Fixed critical bugs that decreased accuracy by as much as 50% in certain circumstances.

Web Developer of Course-Picker

- Used JavaScript, Python, VueJS, SQL to web-scrape online databases, and built a website which students use to find the best courses at UofT based on workload, professor enthusiasm and student recommendations.

Android Developer of TimeTable-Scheduler

- Built Java App allowing UofT Students to generate best timetable for their preferences.
- Used optimization algorithms to sort through 1,000,000 possible combinations and provide the best timetables in less than 3 seconds.

Android Developer of ShareTheNet

- Used Java and HOTP Algorithm to connect users to participating hotspots around them, using HMAC to share hotspot passwords.

Android Developer of HackThe6ix Project

- Built mobile dascham that reports dangerous driving, and integrated speech recognition for in-app voice navigation.

Web Developer of Fake News Chrome Extension, UoftHacks-Hackathon

- Used Javascript to build a Chrome Extension which gives an article a score for its accuracy and bias, and suggests similar news articles from reputable news organizations.

Python Developer of Custom Mail Merger for UofT Business Club

- Created personalized mass email system for UofT business club, increasing efficiency by 70% and reducing human error.

Python Developer in the CanSat Competition, European Space Agency (ESA)

- Won 5th place in the UK in 2017 for Python system design for Raspberry Pi which collected over 5,000 data points of temperature, pressure, and humidity during a flight of a CanSat Satellite.

SOCIAL IMPACT

Founder of Superhumans

- Project used Cognitive Behavioral Therapy Techniques to help over 200 teenagers with social anxiety to develop confidence.
- Coordinated team of 7 people to secure funding, manage agenda, speakers and venues.

HONORS & AWARDS

- Awarded Lester B. Pearson International Scholarship for distinguished academical merit and social activism, valued at $54,000/year for 4 years, won by 37/5000 applicants.
- Awarded the HMC Scholarship to Study at Tonbridge School, England, for leadership and social activism, valued at $60,000/year for 2 years, won by 5/500 applicants.