

# Shayon Banerjee

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## Technical Skills

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**Languages/Tools:** C, C++, C#, Java, Python, SQL, JavaScript, R, Django, React, Pandas, TensorFlow, Spring

## Education

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**University of Waterloo**

Sep. 2015 – Aug. 2020

- Candidate for Bachelor of Computer Science

## Experience

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**Amazon - Software Development Engineering Intern**

Sep. 2019 - Dec. 2019

- Integrated AWS X-Ray with the PDEX service to gather performance metrics and root-cause latency issues in Prod
- Extended team's service to dynamically throttle X-Ray sampling rates based on marketplace exception trends
- Analyzed instrumentation on a shadow host to observe a mere 15 microseconds to the request-response lifecycle
- Created reports on regressions in performance and errors based on aggregated service traces to increase team visibility

**Correlation One - Software Engineering Intern**

May 2019 - Aug. 2019

- Designed, implemented, and tested the backend for the XTX Challenge, a project featured on Markets Insider
- Developed a performant submission environment for assessing Python and R models, handling over 15,000 submissions
- Streamlined feature releases for all company projects by automating builds and deployments using Travis CI
- Optimized PostgreSQL schema to reduce load and query multi-million rows for a candidate data visualization tool

**Correlation One - Software Engineering Intern**

Sep. 2018 - Dec. 2018

- Created the GCP Kubernetes infrastructure for Terminal, an AI Games product reaching over 20,000 active users
- Built the foundation for running online and in-person coding competitions, earning over \$2 million in profits
- Implemented the Glicko-2 rating system over Elo, requiring 70% fewer matches for accurate leaderboard placements
- Created a database migration script improving testability by streamlining production data across testing environments

**IBM - Software Developer Intern**

Jan. 2018 - Apr. 2018

- Resolved 34 defects on QRadar's data collection and processing pipelines - exceeding delivery expectations by 425%
- Patched a data-forwarding encryption defect on legacy platforms, shipped to over 4,000 global clients
- Extended IPV6 support to the data visualization components of the incidence reporting views

**CAE - Full-Stack Developer Intern**

May 2017 - Aug. 2017

- Developed tools for a deep statistical analysis of the cause of an observed trend in inaccurate pilot assessments
- Increased unit test code coverage from 20% to 90% on NextGen, a data-driven training product accessing pilot ability

**Macrotech - Software Developer Intern**

May 2016 - Aug. 2016

- Designed, implemented, and tested a winsock2 notification tool on a high-vacuum process controller
- Improved feature analysis by implementing an automated reporting system that gathers statistics on customer data

## Projects

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**MyChauffeur**

- Developed a CNN model for vehicle movement classification trained on 10 hours of gameplay on a simulator

**LawYourUp**

- Trained a model on 300,000 court cases using Doc2Vec to power a tool that optimizes the search for legal precedent

**IslandConquer**

- Built a 3D FPS multiplayer game with 4 levels of heuristic AI bots, custom map setup, and score keeping