

RAVI SETH

Mechatronics Engineer specialized in **Computer Vision + ML**

github.com/rksseth | linkedin.com/in/rksseth | ravi.seth@uwaterloo.ca | (519) 993-7284

EDUCATION

UNIVERSITY OF WATERLOO | BAsC Honors Mechatronics Engineering (Distinction) Sept. '16 - Apr. '21

- Machine Learning, Pattern Recognition, Data Mining, Co-operative and Adaptive Algorithms, Database Systems
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WORK EXPERIENCE

KONRAD | SOFTWARE ENGINEER Toronto, ON | Aug. '21 - present

- Led development for Banking Portal API to **establish secure financial data-sharing for 30+ Banks and 700+ FinTech companies**, using TypeScript, Node, GraphQL, Apollo, CosmosDB
- Built and maintained ORM from scratch to create **secure parameterized SQL queries** with filtering, sorting, pagination
- Integrated GraphQL-Codegen to reduce code-duplication and ensure types consistency between frontend / backend
- Implemented unit and integration tests to ensure backend robustness with 85%+ code coverage, using Jest

AMAZON WEB SERVICES | SOFTWARE ENGINEER INTERN Vancouver, BC | May '20 - Aug '20

- Built validation stage for Payment-Fraud pipeline to **compute statistics and identify 80+ types of data anomalies** improving debugging, data cleaning, and ML model training using Python, Scala, Spark, DynamoDB, AWS
- Leveraged distributed processing to **reduce memory consumption and improve processing speed by 60x** for validation system, using Python, Scala, Spark, Zeppelin
- Completed performance benchmarking on data validation libraries and recommended scalable and efficient design

KLYCK | FULL-STACK ENGINEER INTERN Waterloo, ON | May '19 - Aug. '19 | Jan. '20 - Apr. '20

- Lead engineer on 8-month Office365 integration to allow **10,000+ users to seamlessly edit Office365 files real-time** by building Angular UI components and backend REST API deployed in scalable microservice
- Ensured robust API by **passing 100% of Microsoft's Standard WOPI Validator Test Suite**

UNIVERSITY OF WATERLOO | CYBER-SECURITY ENGINEER INTERN Waterloo, ON | Sept. '18 - Dec. '18

- Integrated two-factor auth with Android app and REST API to improve file security using Java, Node, JavaScript
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PROJECTS

SETHSQUASH | MACHINE LEARNING & COMPUTER VISION PIPELINE sethsquash.com

- Built an sports-analytics pipeline **identifying / tracking players with pose estimation & classification algorithms** using Python, SciKit-Learn, TensorFlow, Jupyter, GCP, VM - servicing 4 customers with 30 hours video analyzed
- R&D **fast-moving object (FMO) detection & tracking** using state-of-the-art algorithms and morphological computer vision operations to expand volume of data analytics generated

WESCHEDULE | FULL-STACK APPLICATION weschedule.ca

- Built an optimal graph-scheduling algorithm that **reduced scheduling time by 6x** using graph implementation
 - Reduced deployment size by 10x** and implemented lazy loading to significantly improve site loading performance
 - Monthly deployments of application **used by 35+ UW Varsity Squash Players**, with Angular, TypeScript, Node, Firebase
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SKILLS

Languages

Python • Java • C++ • TypeScript • R • Scala • Swift • C#

Technologies

TensorFlow • SciPy • OpenCV • Scikit-Learn • GraphQL • React • Angular • Node

Tools

AWS • GCP • Jupyter / Zeppelin Notebook • Firebase • Android / iOS Development