Jeet Trivedi

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EXPERIENCE

- **Backend Software Developer** — December 2019 - Present
  CTH Controls Inc — *Oakville, ON*
  - **Call-Off System**: Designed and implemented an Autonomous Mobile Robot (AMR) fleet management solution in an automobile manufacturing setting.
  - **Camden LMS**: Created a multi-user line monitoring and control software. Currently training a model to allow early fault and breakdown detection based on live sensor data.
  - **Ship Engine Health Monitoring**: Using a combination of sensors, designed a system for high speed capture of engine data. Trained a deep learning model to detect hardware issues early and recommend preventative maintainance.
  - **Silo Monitoring Solutions**: Worked on a novel non-invasive silo monitoring system allowing users to monitor and manage large arrays of silos remotely without a large setup cost.
  - **REST APIs and DB Design**: Designed Databases and data pipelines for various large scale data capturing projects ranging from automation to monitoring.

- **Research Assistant** — September 2017 - May 2019
  University of Western Ontario — *London, ON*
  - **Numerical Analysis and Computer Algebra**: Implemented numerical methods for fast and efficient evaluation of highly oscillatory integrals in Python and Maple. Explored the implementation of Rule Based Integration framework to improve the integration capabilities of Maple.

- **Research Assistant** — Summer 2015 and 2016
  Trent University — *Peterborough, ON*
  - **Statistical Modeling and Optimization**: Modelled and implemented a non-linear stochastic optimization model to address the resource allocation problem in an arid country. Created a user interface allowing easy input of data and interpretation of the output by the user. Compiled analyses of various scenarios to demonstrate the impact of resource allocation choices.
  - **Numerical Programming**: Worked on creating and implementing a new method for numerically solving non-linear multi-point boundary value problems.

PROJECTS AND PUBLICATIONS

- Abdella, K., & Trivedi, J. (2020). Solving Multi-Point Boundary Value Problems Using Sinc-Derivative Interpolation. Mathematics, 8(12), 2104. [link]
- Trivedi, J. (2019). A Survey Of Numerical Quadrature Methods For Highly Oscillatory Integrals. [link]

PROGRAMMING SKILLS

- **Languages & Frameworks/tools**
  - **Languages:** Python, Typescript, Go, SQL, R, C/C++, C#.
  - **Web Frameworks:** Next, React, Flask.
  - **Cloud:** AWS, CDK, Terraform.
  - **ML:** Spark, Pandas, Tensorflow, Pytorch, Scikit-learn.
  - **Misc:** Git, Docker, Kubernetes, linux.

EDUCATION

- **University of Western Ontario** — London, ON
  Master of Science in Applied Mathematics — *May 2019*

- **Trent University** — Peterborough, ON
  Bachelor of Science (Honours) in Mathematical Physics — *May 2017*

References Available Upon Request