

DANIAL KHAN

Toronto, Canada

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EDUCATION

University of Toronto

BASc. Computer Engineering + PEY Co-op

Apr 2025

Toronto, Canada

WORK EXPERIENCE

Rocscience

May 2023 - Aug 2024

PEY Software Developer

- Spearheaded the development of a new full-stack application to unify 19 Rocscience desktop products
- Led the project planning phase, collaborating with the CEO, CTO, and international clients for feasibility and market research, resulting in a well-defined project scope and alignment with market needs
- Designed a tech stack using gRPC with protobufs for efficient communication, React frontend, and PostgreSQL backend, which improved system performance and scalability
- Implemented a gRPC server with unary and client/server streaming, developed nested tables, file systems, CRUD operations, and a versioning history for data, and wrote 120+ unit tests, ensuring robust and reliable application functionality
- Managed an intern in the final month, applied Agile Development, and conducted load performance testing, leading to improved code quality and application performance
- Contributed 21k+ lines of code, ensuring seamless integration across Rocscience's product ecosystem
- Added support for OracleDB to ASP.NET application
- Strengthened security by implementing OpenIddict with OAuth0, introducing Scopes and policies, which enhanced data protection
- Developed an Excel add-in for React, integrating API calls to RSLog ASP.NET app with 19k+ lines of code

Rocscience

May 2022 - Aug 2022

Software Developer Intern

- Designed and implemented 15% of new web version of RocPlane, their best-selling desktop application
- Developed a Django API gateway to facilitate seamless data transfer between React and MongoDB, improving data handling efficiency
- Optimized querying of data, improved modularity by 80% using methodology of test-driven development
- Planned and assisted in migrating the Django REST API to AWS cloud, enhancing scalability and reliability
- Created an alternate Django API with an Amazon DynamoDB local instance, providing a robust backup solution
- Integrated external service Auth0 to authenticate and authorize user management, enhancing security and user experience
- Developed an algorithm to create a tile view in a web application using JavaScript, React, and Redux, improving content organization and user interaction
- Resolved 2 to 5 bugs daily in August on a React website, enhancing site stability and user satisfaction

PROJECTS

Apparelo

May 2022 - Aug 2022

- Developed an open-source ML apparel type recognizer with over 97% accuracy using AlexNet in a team of four
- Trained via Recurrent Convolutional Networks, AlexNet, GoogleNet, ResNet 50 implementations

RocSim

May 2022 - May 2022

- Architected a HoloLens software for visualizing Rock samples in a variety of environments including rain and debris simulation (C#, Unity, Visual Studio)
- Led a team of 4 and won a companywide hackathon in developing HoloLens application using C# and Unity

Delivr

Jan 2022 - Apr 2022

- Collaborated in a team of 3 to create a mapping application comparable to google maps
- Used C++ to implement Dijkstra's, and Greedy Heuristics with Glade UI
- Dynamically displays useful content for user at different zoom ratios using C++ STL library ezgl

SKILLS

- **Tools and Languages:** Python, JavaScript, TypeScript, C, C#, C++, Git, Django, .Net, gRPC, protobuf, ARM Instruction Set, React, Redux, MATLAB, HTML/CSS, Pytorch, TensorFlow, NumPy
- **Development Tools:** Agile Development, Waterfall Development, Git, DevOps, Auth0
- **Platforms:** Amazon DynamoDB, MongoDB, PostgreSQL, SQL Server, Linux