Salik Nadeem

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Professional summary

- Graduate student specializing in Deep Learning and Computer Vision.
- 6+ years of experience as a Software Engineer and team lead.
- Skilled in development and deployment of machine learning models in production.
- Excellent analytical & problem-solving skills, including the ability to translate analytical findings into actionable recommendations
- Exceptional and reliable team player with strong leadership skills.

Technical skills

- **Programming languages:** Python, C++, C, Java, MATLAB, JavaScript
- **Machine Learning frameworks:** PyTorch, TensorFlow, Keras
- **Deep Learning algorithms:** CNNs, RNNs (LSTM, Bi-LSTM), Transformers, VAEs, GANs
- **Data processing and visualization:** NumPy, Pandas, SciPy, Scikit-Learn, Matplotlib, Tableau
- **Image processing:** OpenCV, Scikit-Image, Plotly
- **Databases:** MySQL, MongoDB
- **Web development:** Bootstrap, Flask, WordPress, AngularJS, Node.js, Rest APIs
- **Cloud platforms:** AWS (RDS, Elastic Beanstalk, EC2, S3, Route 53, etc.)
- **Version control and DevOps tools:** GitHub, GitLab, Bitbucket, Docker, Continuous-Integration
- **Graphics & Animations:** CUDA, VFX animations & motion graphics in After Effects, Cinema 4D
- **OS:** Windows, Unix/Linux, Mac-OS

Experience

Graduate RA/TA, Ontario Tech University — Jan 2019 - present

- Courses taught: Operating Systems, Scientific Data Analysis, Systems Programming, Computer Vision.
- Conducted labs/recitation sessions and marked quizzes/exams.
- Average Ratings of 4.3 out of 5.0 from anonymous student feedback surveys.

Lead AI Engineer, Homestove. — Oct 2016 – May 2018

- Homestove is an online platform that enables the sale and purchase of affordable home-cooked meals.
- Analyzed usage data (timestamps, locations, active time, etc.) from thousands of users (chefs and buyers) to help with key business decisions such as improving order fulfillment from 70% to 95% and optimizing delivery routes for supply-side operations.
- Developed dashboards for running daily operations, resulting in a lean and optimized workflow for all teams.
- Developed and deployed a ML model to enable daily workload predictions for the logistics team.
- Technologies used: AngularJS, D3JS, MySQL, Node.JS, Python, AWS Cloud, Android, iOS.

Mobile App Developer, BrainLogix. — Aug 2013 – Mar 2017

- Developed multiple games for Android and iOS, with select titles downloaded over 100,000 times, generating ads and in-app purchasing revenues.
- Developed, tested and deployed over 20 applications to Google Play and App store for multiple clients in areas of E-Commerce, healthcare, social media, Customer relationship management, etc.
- Technologies used: Unity3D, Cocos2D, Android SDK, iOS SDK (UIKIT), Java, Objective-C.

Software Engineer, Tintash. **Sep 2012 – Aug 2013**

- Worked with a team of engineers to develop native applications for iOS including projects like utility apps, attendance management systems, etc.
- Developed and tested mobile games using Unity 3D & Cocos2D-x.
- Technologies used: Unity3D, Cocos2D, Android SDK, iOS SDK (UIKIT), Java, Objective-C.

Select projects

Cross-view action recognition (MSc Thesis) **Jan 2020 - present**

- Developed a deep learning model for view-invariant action recognition
- This work uses a CNN+bi-LSTM model with dynamic multitask loss based on homoscedastic uncertainty for action recognition.
- The model produces comparable results to the state-of-the-art models which use RGB and depth maps alone for cross-view action recognition on the NTU-RGBD dataset.
- Core technologies used: Pytorch, Python, C++

Social distance tool with depth **May 2020**

- This work takes a video as input and highlights people who are not the maintaining social distance protocol.
- It uses Faster-RCNN along with a monocular depth estimation model to calculate the distance between individuals and highlights those breaking the protocol.
- Technologies used: TensorFlow, OpenCV, Python.
- Project link: https://saliknadeem.github.io/portfolio/sdt/

Real-time gesture tracking using online learning (BSc. Thesis) **Dec 2012**

- Using classical Computer Vision and Machine Learning this tool is able to start learning and tracking a gesture using just a single still image.
- Implemented TDL algorithm based on LK tracker, sliding window detector and random forests for feature representation.
- Performance at 15 fps on a laptop and achieved ~6-5 fps on iPhone 2/3.
- Technologies used: OpenCV, C++.
- Project link: https://saliknadeem.github.io/portfolio/tdl-tracker/

Education

MSc Computer Science | Jan 2019- Present | Ontario Tech University, Oshawa, Canada.
BSc Computer Science | Sep 2008- Jun 2012 | LUMS, Lahore, Pakistan.

Certification and Awards

Winner of Intel & OpenCV's Spatial AI Competition (Phase 1) **July 2020**

- Selected as a winner from over 230 competitors for developing a social distancing model using OAK-D.

Deep Learning specialization (5 courses) **Mar 2020**

- Specialization offered by deeplearning.ai on Coursera.
- Certificate link: https://www.coursera.org/account/accomplishments/specialization/BMNYXU98TSST

IEEE Xtreme Endurance Programming Competition **Oct 2011**

- Ranked 30th among 1500+ teams from 65 countries in a 24-hour coding challenge. Solved all problems using C++.