Basic info

Alexiy Charamko
Data Scientist and Engineer
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Australian & US citizenship
Fluent English & Russian

Summary

I have a passion for mathematical modeling and developing well-architected systems to solve real world problems.

In solving problems I focus on finding and implementing references to the underlying real world phenomena.

Skills

Core skills

Mathematical techniques - Bayesian and Fisher statistics, Random forests, NN, PCA, simulations, signal processing, linear systems and control engineering, experiment design
Data stores, queues, ETL - SQL RDBMS', Spark, Kafka, DynamoDB, S3, SQS, Glue, Redshift, InfluxDB
Data governance - frameworks, nomenclature, definitions, metadata, data lineage, work prioritisation, roles, security
Data visualization - D3.js, Vega.js, ggplot, seaborn, Tableau, Amplitude, Apache Zeppelin, Mode Analytics, Google Analytics, Grafana, Jupyter Notebooks
Software development - Python, R, git, docker, k8s, CI/CD, make files, shell/bash, terraform, ECS, AWS Lambda, javascript, HTML, CSS

Other skills

C, C++, Scala, Mturk, CUDA, Matlab, Simulink, Haskell

Education
B.Eng Mechanical and Manufacturing, 2008-2014, UNSW
B.Sci Genetics (Hons.), 2014-2016, UNSW

References

Wilberto Palomar, Lead DevSecOps, Uno Home Loans
- Worked together on deployment environments & data architecture | +61424285862 | wilberto.palomar@gmail.com

Richard Weiss, Lead Data Engineer, Skyfii
- Team lead | richardweiss@richardweiss.org | +61413710755

Dr. Irina Voineagu, Snr. Lecturer & ARC DECRA Fellow UNSW
- Honours Supervisor | i.voineagu@unsw.edu. | +61293850114

Dr. Shafagh Waters, Postdoctoral Research Assistant UNSW
- Internship Advisor | shafagh.waters@unsw.edu.au

Experience

Team Lead and Data Scientist, Uno home loans, 2017 Jun - present

Lead for a team of 2 other data analysts, reporting directly to CTO and other C-levels.
- Designed and developed sales lead prioritisation model using random forests (leadScore)
- Designed and developed ad-hoc machine learning models to understand customer propensity to do X or have Y value
- Designed and developed machine learning unsupervised clustering of customers for marketing personas
- Designed and developed a machine learning model to understand the characteristics of a complex financial calculator (loan serviceability)
- Designed and developed customer facing algorithm for assessing their current home loan (loanScore, Australian Good Design Award 2020)
- Established core data development library - automated deployment, automated testing, common library functions and classes
- Established data governance framework - nomenclature, data dictionaries, access roles, work prioritisation flow, development flow, secure sharing of data
- Designed and developed automated framework for machine learning environment creation using AWS CLI, terraform, and AWS Sagemaker
- Designed and developed data lake, data warehouse and ETL processing jobs for ~20 data sources using event sourcing pattern, PySpark, AWS Lake Formation, AWS S3, AWS Glue, AWS Redshift, AWS DMS, AWS CLI, and terraform
- Designed entity relationship model for the business
- Designed and developed various self-serve dashboards and ad-hoc analyses using Tableau, Apache Zeppelin, Jupyter Notebooks, and later Mode Analytics

Data Scientist, Skyfii, 2016 Nov - 2017 Jun
Junior in a team of 3 data scientists.
- Designed and developed clustering analysis of spatial movement data
- Designed and developed metrics based on spatial movement data and retail sales
- Designed and automated creation of reports to present to customers
- Worked with sales and spatial data from 1000s of physical locations (typically retail)

Research Assistant (Hons.), UNSW Voineagu Group, July 2015-July 2016
Conducting research to further laboratory topics, and teaching interns.
- Developed data analysis pipeline for multi-tissue genomic data (> 500 GB).
- Automated statistical testing and data exploration.
- Investigated statistical and real-world (biological) significance of analyses.
- Co-authored paper - http://dx.doi.org/10.1007/s00018-016-2304-0

Molecular Biology Research Intern, UNSW Kevin Morris Group, Mar - July 2015
- Performing experiments, presentation & review of literature

Winter Mech. Engineering Intern, Caitin Inc., Nov 2009 - Mar 2010
- Math. modelling, CAD, 3D prototyping.

Winter Mech. Eng. Intern, PAX Streamline, Nov 2008 - Mar 2009
- 3D data acquisition and CFD (computational fluid dynamics).