Alexander Schaap

Software Engineer

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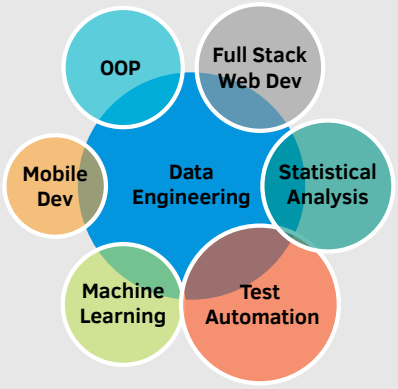
aschaap

Skills

Overview



Programming

$0\ LOC \longrightarrow 5000\ LOC$

HTML5 • JS • Python

Java • SQL • LaTeX

C • C++ • R

Projects

DecAR - An augmented reality interior decoration app for Android

CIS*6320 - An implementation of the Bicubic interpolation algorithm in C++

CIS*6650 - A comparative statistical study of SVM kernels, and number of hidden layers in ANN, on 5 UCI datasets

CIS*6660 - A data linkage project to integrate Canada's WWI casualties and 1901 Canadian census using an SVM

CIS*6650 - A statistical study of spurious correlations, such as correlating beer production with election outcome

Education

2017 - Now **Ph.D., Software Engineering** McMaster University, Canada

2014 - 2016 **M.A.Sc., Software Engineering** McMaster University, Canada

2009 - 2013 **B.Sc., Computer Science** Twente University, the Netherlands

Research

2015 - 2017 **MSc. Candidate, Graduate Research Assistant** University of Guelph

Thesis: Data Integration from Multiple Historical Sources to Study Canadian Casualties of WWI

- Proposed a scalable stepwise deterministic method to reliably integrate datasets without labeled data. The method performs comparably with a method that incorporates a Support Vector Machine
- Constructed a rich longitudinal dataset to enable comphrehensive time-series analyses about WWI Canadian society and military
- **Tools**: R, Python, scikit-learn, BeautifulSoup, pandas, matplotlib

Publications

Aili (Alice) Zou and Douglas Down. "Asymptotically maximal throughput in tandem systems with flexible and dedicated servers". In: *Asia-Pacific Journal of Operational Research* (2018). Submitted.

Experience

Jan 2017 - Present **Graduate Research Assistant** McMaster CERC in Hybrid Powertrain

- Currently researching migration of legacy automotive software (Simulink) towards compliance with the AUTomotive Open Software Architecture (AUTOSAR) standard.

Oct 2016 - Dec 2016 **Research Engineer** McMaster CERC in Hybrid Powertrain

- Finalized the documentation automation effort from the previous Research Assistant Position (below).

Mar 2014 - Aug 2016 **Graduate Research Assistant** McMaster CERC in Hybrid Powertrain

- Under the FCA APC LEAP project – a large multidisciplinary project between McMaster University and Fiat Chrysler Automobiles (FCA) to develop next generation high-performance hybrid powertrains.
- Evaluated various symbolic modeling tools and created a detailed comparison between them.
- Worked with domain experts to reverse-engineer, document and analyze several large FCA Simulink models.
- Directed and assisted in the creation of a process and accompanying templates for automated documentation of Simulink models. Included the supervision of an undergraduate student for 16 months with minimal intervention of supervisors.

Feb 2013 - Dec 2013 **IT Manager (part-time)** Soltree Sustainable Solutions

- Website design, maintenance and management
- Maintaining computer network and communications
- System maintenance and upgrades, and troubleshooting

Sep 2012 - Oct 2012 **Undergraduate Teaching Assistant** University of Twente, the Netherlands

- Second-year Databases course
- Assisting students with lab assignments and verifying solutions