

Matthew Peyrard

SOFTWARE ENGINEER

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Skills

Programming	C, C++/C++14, C#, CUDA, Java, \LaTeX , MatLab, Python.
Machine Learning & Data Science	NumPy, Pandas, scikit-learn
Natural Language Processing	Apache OpenNLP, NLTK, Stanford CoreNLP
Database & Search	Apache Cassandra, MSSQL, Solr/Lucene.
Distributed Systems	Apache Mesos, Apache Storm, Datastax Enterprise.
Web, Graphical and GIS	ASP.NET, ESRI ArcGIS, ArcObjects, JAX-RS, WPF, wxWidgets.
Leadership	Experience as Team Lead and Scrum Master.

Projects

Multiplayer Blackjack (Class Project)

Carleton University

TEAM LEAD

- Team lead in a group of four students tasked with creating a multiplayer blackjack game.
- Responsible for designing and documenting the application architecture.
- Responsible for coding the server-side components that drove the lobby and Blackjack game orchestration.
- Server-side components were written in C++, and communicated with the clients via TCP sockets.

Experience

JSI Telecom

Ottawa, Canada

SOFTWARE ENGINEER

March 2015 - Present

- Designed and implemented several advanced distributed search, filtering and sorting algorithms using Apache Lucene/Solr and Cassandra. These algorithms are capable of efficiently performing operations on billions of data records across hundreds of nodes.
- Applied machine learning techniques to solve classification problems involving big data.
- Used natural language processing techniques to solve linguistic classification problems involving big data.
- Built many advanced graphical features using WPF for a client application.

Nanometrics

Ottawa, Canada

SOFTWARE ENGINEER

July 2014 - March 2015

- Performed theoretical work to analyze the complexity of the various data acquisition patterns encountered by the time-series database built and maintained by the company.
- Used results of theoretical work to design algorithms that optimize the way in which data is consumed when the system is under heavy load.
- Designed a new threading and synchronization model for the database to increase its scalability.

Education

Carleton University

Ottawa, Canada

BACHELOR OF COMPUTER SCIENCE

- Graduated with Highest Honours, Co-operative Education, GPA: 11.54/12
- Thesis: "Massively Parallel Path Finding on the TESLA architecture.", Advisor: Prof. Frank Dehne

Udacity

MACHINE LEARNING NANODEGREE (IN PROGRESS)

Coursera

DATA SCIENCE: MACHINE LEARNING

Honors & Awards

ACADEMIC

- 2010 **Senate Medal**, Outstanding Academic Achievement
- 2005-2009 **Dean's List Scholarship**, Outstanding Academic Achievement

Carleton University

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