

TONY MOWERS

Software Engineer & Data Scientist



Contact Information

Tony Mowers
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Nationality

Swiss and Canadian

Education

Bachelor of Applied Mathematics
University of Waterloo, Canada

Data Science Studies

Ongoing Independent Studies

- Machine Learning
- Multivariate Analysis
- Inferential Statistics
- Data Visualization
- Business Analytics
- Scala Programming

Work Experience Summary

1989 to Present

- Founder of software consultancy company
- Part-time teaching assistant at Berner Fachhochschule
- Architect of several products
- Mentor and team lead for several engineering teams
- Mentor for several company level change initiatives
- J2EE, C#/.NET and HTML enterprise applications
- Machine learning based commodities trading
- Architect of IoT solution for SaaS transit application
- Embedded software for transit/telecom equipment
- Network management software for telecom
- Desktop CASE tools for C++ and business processes
- Co-founder of open-source modelling tool

Preferred Programming Languages

- Java
- Python
- C#
- Javascript es6
- C++

Methodology Competencies

- SCRUM Product Owner
- SCRUM Master
- Kanban Boards
- Rational Unified

Patent Related Work

- Dependency management in embedded software
- Behavioral driven testing for VOIP systems

Teaching Experience

- Iqnite Conference: Continuous Improvement
- Iqnite Conference: Domain Languages for TDD
- Agile Practices, Behavior Driven Development, XP Programming
- Data Science
- C++ and Distributed Application Development

- 2018 - Present **Elevator Products Configuration/Pricing/Quoting Solution**
Contract (renewed): Vantage Elevation -- Bronx, New York
- Responsibilities:** develop, and integrate, a Configuration/Pricing/Quoting solution for multinational elevator product supplier. Promoted multiple times: software engineer, architect, project manager, technical consultant to CIO/CFO, regularly assist in hiring processes.
- Technologies:** Java, Spring, Hibernate, Cucumber, Maven, Gulp, NPM, HTML, SCSS, Postgres, AWS cloud services, AWS CI/CD pipeline, Git, Jira, HTML, SCSS, REST APIs
- 2018 - Present **Software Engineering Instructor**
Part-time: Bern University of Application Sciences
- Responsibilities:** train undergraduate computer science students in industrial software engineering practices
- Technologies:** Java, Spring, Git, Git Actions CI/CD, Docker, Cucumber, REST APIs, Gulp, NPM, HTML, SCSS, Vue.js
- 2017 - 2018 **Customer Portal and Point of Sales Solution**
Contract (client of 15+ years): TalkTalk -- Zug, Switzerland
- Responsibilities:** develop software solutions that improve customer onboarding process for telecom provider. Multiple solutions developed for multiple platforms such as: website, tablets, and passport scanning devices.
- Technologies:** C#, .NET, Javascript ES6, Vue.js, Wordpress, PHP, SqlServer, Gulp, NPM, HTML, SCSS, REST APIs
- 2015 - 2016 **Graduate Studies in Data Science and Statistical Learning**
Student: Neuchatel University and Online Courses
- Technologies:** Python, Java, Jupyter Notebook, Anaconda, Scikit-learn, Pandas, Tableau, R
- Publication:** *Journal of Spational Research and Planning* 76
[Housing Space Overconsumption: Empirical Evidence for Switzerland](#)
- 2014 - 2015 **Algorithmic Trading**
Contract (renewed): Commodities Trading Company -- Wall Street, New York City
- Responsibilities:** analyze existing trading practices, and develop decision support system for securities trading that utilizes statistical learning principles. Developed system, researched strategies, and executed trades.
- Technologies:** Python, Java, Jupyter Notebook, Anaconda, Scikit-learn, Pandas, Bloomberg Data Services

2004 - Present

Principal Software Engineer, Data Scientist and Owner
Alika Analytics AG -- Ligerz, Switzerland

In my role as a consultant I am regularly hired to lead software engineering projects and/or implement complete solutions. A major component of that work is mentoring engineering team members.

For the companies which specialize in building software products I've been contracted to review engineering practices, recommend process improvements, and mentor engineering improvements.

I have helped lead major engineering change initiatives for companies such as: *Informatica*, *DRW Trading* and *Clarus IPC*. For example, at Informatica I mentored a process improvement project at the program level which consisted of about 400 software engineers.

Summary

- Guided several client software engineering improvement initiatives
- Setup DevOps and Cloud services for development teams
- Mentored several engineering teams on Agile/XP practices
- Assisted clients with management of outsourced projects
- Established quantitative trading team for Wall Street commodity firm
- Implemented machine learning and portfolio management algorithms
- Designed/implemented many client applications (web/database/client-server)
- Designed/implemented point-of-sale systems for retail stores
- Analyzed, automated, and instrumented client business processes

1998 - 2003

Senior Software Architect, Team Lead and Consultant
Self-employed -- Berkeley, California

As a freelancer I was frequently contracted to lead engineering teams and help startup companies to design/implement/deliver new products and product prototypes.

Summary

- ClarusIPC: lead engineering change initiative and presented to VC investors
- NextBus: architect SaaS passenger information and transit operations platform
- NextBus: firmware developer for devices on transit vehicles
- ClarusIPC: architect/team-lead, enterprise VOIP testing product web application
- NightFire: architect/team-lead, enterprise DSL provisioning GIS application
- WindRiver: architect/team-lead for desktop IDE product

1995 - 1997

Software Architect and Team Lead
Wind River Systems -- Alameda, California

Lead usability improvement initiative for WindRiver's Tornado 2.0 Desktop IDE.

Summary

- Architect/team-lead for desktop IDE for embedded applications
- Implemented component dependency management tool
- Team greatly improved out-of-box experience for the product

1994 - 1995

Software Architect and Technical Trainer
TCSI -- Berkeley, California

Travelled to customer locations to deliver courses in distributed application development and helped review designs for network management products.

Summary

- Implemented distributed telecom network management applications
- Taught telecom software engineers distributed application design

1989 - 1994

Member Scientific Staff
Bell Northern Research -- Ottawa, Canada

This was my first major software engineering position and it was on what was at the time the world's largest realtime software engineering project (4000+ engineers developing the DMS 100 telecom switch).

Summary

- Developed embedded software for telecom switching devices
- Provided architecture guidance for software project