

# Paul Borza [paw:l 'bɔr,za]

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Principal software engineer with full-stack experience in highly scalable search engine design.  
Rubik's cube aficionado. MBA student.



## Experience

Oracle, Cloud Infrastructure

Principal Member of Technical Staff

Seattle, Washington

TBD 2018

Microsoft, Bing UX Foundation

Senior Software Engineer, Technical Lead – *Cross Platform Development*

Bellevue, Washington

Jul. 2016 – Nov. 2017

Tasked with building a framework for rapid prototyping of new mobile products and features for Bing using traditional methods (Java, Objective-C and Swift). Challenged the status quo by doing a thorough research of cross platform open-source and Microsoft-internal projects. Pushed through several managers' skepticism to such an approach since a new model had not been proven yet in the industry. Prototyped and released a cross platform mobile application to production in order to prove the viability and maturity of the technical approach. Presented final technical solution to partner-level managers and to the Engineering Corporate Vice President of Bing and got the green-light to go ahead and drive the cross platform initiative in Bing. Trained and mentored several engineers in cross platform development.

The proposed technical solution allows for 95% TypeScript code reuse across Android and iOS; rest of 5% is native to the platform: Java for Android and Objective-C/Swift for iOS. This allows shipping features twice as fast, cross platform.

**9 patents** filed with the United States Patent and Trademark Office

10/2010 – 10/2016

Microsoft, Bing Customer Experience Analytics

Senior Software Engineer, Technical Lead – *Bing Stability*

Software Engineer 2 – *User Experience, Data Mining, Insights and Stability*

Bellevue, Washington

Dec. 2014 – Jul. 2016

Sep. 2012 – Dec. 2014

Lead the Bing Stability V-Team of 50+ engineers for two years and a half. Not only achieved but surpassed the commitments taken in front of Corporate Vice Presidents in five consecutive six-month milestones. Designed the Bing Stability metric to be a measurement of both relevance and engineering excellence. Approached the problem in a systematic way by building a live debug graph of how Bing's components interact with one another, which proved to be key in identifying root causes.

Coordinated and delivered technical fixes in the stack which improved the stability of Bing from 88% to >98%, on par with Google. Redesigned load balancers, caching techniques, object stores, threshold/timeout-based algorithms, unstable features, classifiers and non-deterministic rankers to be stable when faced with a high volume of traffic.

Flew to Beijing when the Bing Stability project took a wrong turn. Spent 10 days debugging and profiling the contextual ranker which was developed by Bing's Search Technical Center in Asia. Got the project back on track and met commitments.

Microsoft Search Technical Center Asia, Business Trip

Beijing, China; 3/2015

Microsoft-wide Hackathon, **4<sup>th</sup> Prize**

2/2014

Microsoft-internal Bing Hackathon, **Mentor, 3<sup>rd</sup> Place** (out of 53)

11/2013

Microsoft-internal Bing Innovation Awards, **3<sup>rd</sup> Place** (out of 56)

10/2013

Microsoft-internal Bing Hackathon, **2<sup>nd</sup> Place** (out of 65)

7/2013

Microsoft-internal Bing Science Fair, **Best Business Value Winner** (out of 72)

5/2013

Microsoft-internal Bing Hackathon, **1<sup>st</sup> Place** (out of 93)

11/2012

Seattle Give Camp, Technical Volunteer

Redmond, Washington; 10/2013

Microsoft, Bing Image and Video Search

Software Engineer 2 – *Instrumentation, Metrics and A/B Testing*

Bellevue, Washington

Jul. 2010 – Sep. 2012

Microsoft-internal Bing Intern Hackathon, **Mentor, 3<sup>rd</sup> Place**

7/2012

Microsoft-internal Bing Hackathon, **Judge**

11/2011

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Microsoft-internal Bing Hackathon, <b>1<sup>st</sup> Place</b> (out of 42)	6/2011
Microsoft University Careers, Eastern Europe Recruiting Events	Bucharest, Romania and Sofia, Bulgaria; 2/2011
AnswerJoy, Massively Multiplayer Online Trivia Game <b>Co-founder</b> – <i>Full Stack Engineering</i>	Cluj-Napoca, Romania 2008 – 2010
Co-founded AnswerJoy, a massively multiplayer online trivia gaming platform, which was licensed and later acquired. Featured on Microsoft.com as <i>Startup of the Day</i> on Nov. 13, 2009. Technical stack included C#, Erlang, JavaScript and MySQL.	
Microsoft, Bing Image and Video Search <b>Software Engineer Intern</b> (total of 50 international interns) – <i>Data Mining Internet Explorer Logs</i>	Redmond, Washington Jul. – Sep. 2009
Jožef Stefan Institute, Center for Knowledge Transfer in Information Technologies Software Engineer Intern – <i>Audio Indexing</i>	Ljubljana, Slovenia Jul. – Sep. 2008
<b>Google Summer of Code</b> , Openmoko Software Engineer Intern – <i>Recognizing Accelerometer-based Gestures</i>	Apr. – Sep. 2008
Microsoft Developer Network, <b>Author, 4 Articles</b>	4/2006 – 12/2007
Microsoft Imagine Cup, <b>Worldwide Finalist</b> in Software Design	Seoul, South Korea; 8/2007
Recruited and lead a team of four college students to win the national finals of Imagine Cup two years in a row, in 1 <sup>st</sup> and 2 <sup>nd</sup> year of college, representing Romania to the European and Worldwide finals. Pitched projects in front of judges worldwide.	
Microsoft Imagine Cup, National Finals <b>1<sup>st</sup> Place</b> in Software Design	Timișoara, Romania; 5/2007
Microsoft Imagine Cup, <b>Central and Eastern Europe Regional Finalist</b> in Software Design	Maribor, Slovenia; 5/2006
Microsoft Imagine Cup, National Finals <b>1<sup>st</sup> Place</b> in Software Design	Cluj-Napoca, Romania; 4/2006
Brooktrout Extreme Code Makeover Contest, <b>1<sup>st</sup> Place</b>	3/2006
Siemens Program and System Engineering, Scholarship	11/2005 – 6/2006
Microsoft Imagine Cup, National Finals <b>3<sup>rd</sup> Prize</b> in Software Design	Iași, Romania; 4/2005
Olympiad, National Finalist in Informatics	Galați, Romania; 3/2005
Unirea National Programming Contest, Participant	Focșani, Romania; 1/2005
Olympiad, National Finals <b>4<sup>th</sup> Prize</b> in Informatics	Buzău, Romania; 4/2004
Component Source Speech Control Contest, <b>1<sup>st</sup> Place</b>	6/2003
Olympiad, National Finalist in Informatics	Focșani, Romania; 4/2003
Ștefan Odobleja National Programming Contest, <b>2<sup>nd</sup> Place</b>	Craiova, Romania; 4/2003

## Education

University of Washington, Foster School of Business Master's Degree in Business Administration – <i>Evening MBA</i>	Seattle, Washington 9/2017 – Present
Babeș-Bolyai University of Cluj-Napoca Master's Degree in Computer Science – <i>Major in Machine Learning</i>	Cluj-Napoca, Romania; 10/2008 – 7/2010 GPA: 9.94; Rank: <b>1</b> (out of 12)
Babeș-Bolyai University of Cluj-Napoca Bachelor's Degree in Computer Science	Cluj-Napoca, Romania; 10/2005 – 7/2008 GPA: 9.85; Rank: <b>2</b> (out of 85)

**Side Project (Rubik's Cube Solver)** Trained Real AdaBoost Haar cascade classifiers to detect Rubik's cubes with high accuracy in real-time (30fps) via web camera; computer vision algorithms implemented in JavaScript. <https://cubetutorial.com>

**Technical Skills** Ansible, big data, C#, CSS, D3, Docker, Elasticsearch, Express, git, Grafana, HTML, Java, JavaScript, machine learning, MongoDB, nginx, Node, OpenCV, performance optimizations, PostgreSQL, PowerShell, Prometheus, PySpark, RabbitMQ, rapid prototyping, React, React Native, Redis, Scrapy, SQL, Swift, TypeScript; Vim.

**Dual Citizenship** Romania and United States of America