

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

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, **4th Prize**

2/2014

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

11/2013

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

10/2013

Microsoft-internal Bing Hackathon, **2nd Place** (out of 65)

7/2013

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

5/2013

Microsoft-internal Bing Hackathon, **1st 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, 3rd Place**

7/2012

Microsoft-internal Bing Hackathon, **Judge**

11/2011

Microsoft-internal Bing Hackathon, **1st Place** (out of 42)

6/2011

Microsoft University Careers, Eastern Europe Recruiting Events

Bucharest, Romania and Sofia, Bulgaria; 2/2011

continues on other side

AnswerJoy, Massively Multiplayer Online Trivia Game
Co-founder – *Full Stack Engineering*

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 *Startup of the Day* on Nov. 13, 2009. Technical stack included C#, Erlang, JavaScript and MySQL.

Microsoft, Bing Image and Video Search

Redmond, Washington

Software Engineer Intern (total of 50 international interns) – *Data Mining Internet Explorer Logs*

Jul. – Sep. 2009

Jožef Stefan Institute, Center for Knowledge Transfer in Information Technologies

Ljubljana, Slovenia

Software Engineer Intern – *Audio Indexing*

Jul. – Sep. 2008

Google Summer of Code, Openmoko

Software Engineer Intern – *Recognizing Accelerometer-based Gestures*

Apr. – Sep. 2008

Microsoft Developer Network, **Author, 4 Articles**

4/2006 – 12/2007

Microsoft Imagine Cup, **Worldwide Finalist** 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 1st and 2nd year of college, representing Romania to the European and Worldwide finals. Pitched projects in front of judges worldwide.

Microsoft Imagine Cup, National Finals **1st Place** in Software Design

Timișoara, Romania; 5/2007

Microsoft Imagine Cup, **Central and Eastern Europe Regional Finalist** in Software Design

Maribor, Slovenia; 5/2006

Microsoft Imagine Cup, National Finals **1st Place** in Software Design

Cluj-Napoca, Romania; 4/2006

Brooktrout Extreme Code Makeover Contest, **1st Place**

3/2006

Siemens Program and System Engineering, Scholarship

11/2005 – 6/2006

Microsoft Imagine Cup, National Finals **3rd Prize** 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 **4th Prize** in Informatics

Buzău, Romania; 4/2004

Component Source Speech Control Contest, **1st Place**

6/2003

Olympiad, National Finalist in Informatics

Focșani, Romania; 4/2003

Ștefan Odobleja National Programming Contest, **2nd Place**

Craiova, Romania; 4/2003

Education

University of Washington, Foster School of Business

Seattle, Washington

Master's Degree in Business Administration – *Evening MBA*

9/2017 – Present

Babeș-Bolyai University of Cluj-Napoca

Cluj-Napoca, Romania; 10/2008 – 7/2010

Master's Degree in Computer Science – *Major in Machine Learning*

GPA: 9.94; Rank: **1** (out of 12)

Babeș-Bolyai University of Cluj-Napoca

Cluj-Napoca, Romania; 10/2005 – 7/2008

Bachelor's Degree in Computer Science

GPA: 9.85; Rank: **2** (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. <http://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