

## Bill Parker

[bparker@neuralocity.com](mailto:bparker@neuralocity.com)

LinkedIn: [www.linkedin.com/in/billwparker/](http://www.linkedin.com/in/billwparker/)

### Summary

Accomplished data analytics and software development professional who has taken large, technical projects from the design stage through all phases of development in projects involving statistical analysis and complexity science. These software products – **Abre**, **Marketing Mix Optimization (MMO)**, **Brand Optimizer**, **WinCross**, **WinQuery**, and **QueryWeb** - have become leaders in the fields of education, marketing research, marketing attribution, and forecasting.

### Professional strengths

- **Leadership skills:** Together with the leadership team helped lead ThinkVine through a successful acquisition. Worked with COO to secure valued partnerships. Led teams of software engineers to the successful completion of development projects within the given time constraints. Responsible for the hiring of developers and assignment of tasks. Worked with customers, internal users, and other managers to set product road map objectives. Managed and integrated teams across Microsoft/C#/Angular/Azure, Java/Python/AWS, and PHP/jQuery/Google Cloud stacks. Led teams in Agile development utilizing Scrum framework.
- **Quality Assurance:** Dedicated to maintaining the highest quality throughout the SDLC by emphasizing a customer/user perspective and promoting a deep domain understanding by the development and QA team.
- **Process improvement:** Implemented process improvements and metrics that increased maintainability, understandability, reliability, transparency, and promoted consistency
- **Analytical ability:** Implemented complex mathematical/statistical algorithms, pipelines, and architectures and presented results in predictive analytics, advertising attribution, simulation, and clustering/segmentation.
- **Technical:** Created long range technical roadmaps. Architected solutions for mobile, Web, and Big Data. Recognized for excellent programming skills in a variety of languages for code/project implementation, design, scalability, and maintenance. Also, able to easily adapt to the design and style requirements of the project. Led and designed solutions across a variety of Cloud platforms: Azure and AWS at ThinkVine and Google Cloud at Abre.io.
- **Communication skills:** Wrote and contributed to marketing materials, documentation, and manuals. Interacted and collaborated with clients to arrive at solutions and have been the primary speaker at user conferences.

### Software skills

**Languages:** Python, C#, R, PHP, Go, Java, C/C++, ASP.Net, VB.NET, Ruby, Vue.js, React, Angular 2+, Type-Script, Django, Spring MVC, Swift, Ionic, Pandas, SQL, MySQL, Flask, PostgreSQL, SQLAlchemy, Entity Framework, MVC, Thymeleaf, Laravel, Razor, .NET Core, WCF, REST, Web API, LINQ, jQuery, JavaS-cript, HTML, CSS, XML/XSL, JSON, Silverlight, Spark, MapReduce, Hive, HBase

**Tools:** Microsoft VS Code, R Studio, IntelliJ, Microsoft Visual Studio.NET, Eclipse, Jenkins, Github, Team Foundation Server (TFS), Jira, TensorFlow, Keras, Firebase, Matplotlib, scikit-learn, Selenium, Bitbucket, Confluence, Google Cloud, Azure, AWS, Tableau, Heroku, Android Studio, XCode, TeamPulse, D3, Plotly, Highcharts, Apache POI, NetBeans, Spark, Databricks, SPSS

**Analytics:** predictive analytics, segmentation/clustering, simulation, and machine learning: neural networks (recurrent, convolutional, etc.), agent based modeling, regression, cluster analysis (K-Means, Hierarchical, etc.), factor analysis, NLP.

## Education

Arizona State University	Engineering (Software), MS
Arizona State University	Mathematics, BS
Northern Illinois University	Marketing/Economics, BS

## Professional experience

### Highlights:

- Designed ThinkVine's Big Data/Machine Learning architecture plan resulting in leading the development of a world class SaaS product for digital advertising optimization, attribution modeling, and path analysis.
- Instrumental in several venture fund backed startups as both a founder and as a key early hire. I brought in process, rapid development, and needed mentoring to help mature the company from startup to a rapid growth company and helped lead, in the case of Thinkvine, to a successful acquisition.
- Taught boot camp classes through the University of Arizona for data science and visualization.
- Developed objectives for product roadmap and short and long-term strategy that would drive customer engagement and satisfaction.
- Engaged in due diligence discussions with potential partners and investors. Part of regular board meetings presenting product and engineering progress and objectives.
- Featured speaker at user conferences.
- Experienced in mobile App development and management in iOS and Android native Apps in Swift, Java, and Ionic/Angular.
- Built agent-based modeling simulation software engine for MMO primarily in C# and digital/marketing evaluation platforms in Java
- Managed, evaluated, and implemented cloud solutions in AWS and Firebase, Azure, and Google Cloud.
- Instituted productivity metrics to initiate a culture of continuous improvement and transparency.
- Improved quality through automated testing and implemented standards and templates around stress, usability, integration, regression, reliability testing, standardized test cases, unit tests, code coverage, recovery and test planning, partition testing, defect tracking, risk management, and periodic refactoring.
- Created exposure to Capability Maturity Model level improvements that were needed such as causal analysis, code reviews, code standards, continuous integration, sprint reviews, post-mortems.
- Implemented individualized training programs and objectives for developers, QA, and UX staff using Pluralsight.
- Improved communication and domain knowledge by creating cross-functional teams.
- Led a team to implement performance profiling of the simulation engine and implemented various multi-threading strategies to dramatically improve performance.

---

<b>Neuralocity LLC</b> <a href="https://www.neuralocity.com">https://www.neuralocity.com</a>	CEO	Chandler, AZ	03/20 – Present
---	-----	--------------	-----------------

Developed SaaS product based on NLP for the auto industry. Also, worked with Abre.io on a SaaS based machine learning site to help K-12 school districts identify at-risk students. The pilot program is with the Cincinnati Public School system. Also, developed a NLP chatbot application with Python and Rasa and wrote a python Flask API wrapper around the Census data API. Consulted with a travel startup in PHP and Wordpress. Working on a NLP based SaaS platform using Flask, Google Cloud, and Python. Also, consulted on an R/Python/SQL machine learning project with PatientPoint, a healthcare device company, that measures interactive device engagement by patients.

---

<b>University of Arizona</b> <a href="https://bootcamp.ce.arizona.edu/data/">https://bootcamp.ce.arizona.edu/data/</a>	Instructor, Data Analytics	Phoenix, AZ	03/19 – Present
---	----------------------------	-------------	-----------------

Teach 24 week data analyzation and visualization boot camps through University of Arizona that are run by Trilogy. Topics included Python, Pandas, Matplotlib, MySQL, PostgreSQL, SQLAlchemy, MongoDB, D3.js, Leaflet.js, Web scraping, Tableau, Hadoop, R, PySpark, and Machine Learning.

---

<b>Abre.io</b> <a href="http://www.abre.io">www.abre.io</a>	Vice President, Software Engineering	Chandler, AZ	03/18 – 3/20
--	--------------------------------------	--------------	--------------

Led the development of a remote team for Abre.io, a company that creates a SaaS plat-form for K-12 schools to help them manage curriculum, learning, conduct, assessments, teacher enrichment, course materials, etc. in Python, PHP, jQuery, Vue, and mySql in Google Cloud. Also, we are implementing machine learning to better predict at risk students and identify the driving factors that can be changed.

---

<b>Consultant</b>			10/16 – 03/18
-------------------	--	--	---------------

In October of 2016, ThinkVine was acquired by Ignite Technologies, Built a Web-based advertising evaluation platform for medium sized businesses that we are currently selling. This system is in Python, Django, Plotly, MySQL, and AWS.

I was also brought in by a startup called Say Hullo that had been trying for two years to develop a mobile CRM/communication App using Ionic/Angular. I was tasked by one of the potential investment companies to get development on track and to make technological decisions, manage the offshore team, and prepare for additional funding. I replaced development staff as needed, implemented an agile development process, moved the .Net API to AWS, set up notifications in Google Firebase, turned around the front end Ionic/Angular development and was able to get a beta release in August with a first release in December of that year.

Additionally during this time, I developed mobile apps for Android and iOS that was accepted into the Google Play Store and App Store using Android Studio/Java and XCode/Swift.

---

<b>ThinkVine, Inc.</b> <a href="http://www.thinkvine.com">www.thinkvine.com</a>	Vice President, Software Engineering	Chandler, AZ	04/02 – 10/16
--	--------------------------------------	--------------	---------------

At ThinkVine, I managed agile development teams through the designing of software solutions to help companies understand nonlinear, dynamical marketing data utilizing the tools of Complexity Science - such as agent-based modeling and machine learning. I directed a team of highly skilled engineers in the

development of our flagship SaaS simulation project called Marketing Mix Optimization (MMO). The heavily threaded MMO was built with a variety of tools including a C# engine, ASP.Net with C#, Entity Framework, SQL Server, WCF, XML, jQuery, Knockout, and AngularJS. The backend is SQL and WCF services that run the simulation parsed out amongst worker nodes. I have also developed innovative GUI software for visualizing, designing, and exploring agent-based systems in C#, VB, and C/C++ and wrote Neural Network add-ons for Statistica in Visual Basic. I also wrote optimization tools that use genetic algorithms to aid in the decision making for difficult problems.

I led the team in building an advertising digital attribution model using machine learning that was being integrated into our MMO software that will take the typical Big Data problem of terabytes of Web data that are impressions and conversions and process these events in Python using Spark/Databricks cluster AWS for fast, real time queries. The front end was Java Spring Boot SPA using HTML, CSS, and AngularJS and REST APIs.

---

**The Analytical Group, Inc.**      Software Development Manager      Scottsdale, AZ    11/92 – 04/02  
[www.analyticalgroup.com](http://www.analyticalgroup.com)

I was responsible for leading a team of developers through the design and development of The Analytical Group's three major software projects in marketing research data collection and analytics. This included all phases of software development. I developed the first crosstabulation analytical software for Windows called WinCross doing all the design and programming in C/C++. In later versions, I integrated the importing of different data types, a spell checker library, charts, spreadsheets, XML output. The next project, WinQuery, required taking an extremely large DOS program written in Fortran and redesigning/rewriting it in C/C++ for Windows. Besides maintaining new versions of these two projects, I led the development of QueryWeb which was a Web version of WinQuery - a CATI system for marketing research. Written in Microsoft Visual C/C++, this project required skills such as JavaScript, ASP, COM, XML/XSL and the coordination of the other developers working on the project.