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# BRET MICHAEL BICKHAM

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## Software Developer

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### Work experience

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2019-07 - 2020-10	Full-Stack Developer <i>CHIT</i> Full Stack Developer C-HIT/GDIT Assigned to complete tasks on various teams within the company to build portal. cms. gov using Angular, React, Redux, and Node. js. The front end of this site was built using Angular 7, React, Redux, jQuery, Javascript, CSS, and Bootstrap. All projects had to be 508 compliant. Video project required custom voice controls for employees that can't use a keyboard. Back-end tasks were completed using Java, Spring Boot, and Maven. Amazon Lambda were used in conjunction with Amazon Lex to create a support chatbot for the application. We worked in an agile environment. All tasks were managed on Jira. Attended weekly sprint meetings and daily scrum meetings to prioritize our workflow. Project was built in a GIT repository which we accessed through Gitlab and Git Bash.
2018-02 - 2019-06	Full-Stack Developer <i>SC Logic</i> Full Stack Developer Hired to create features and fix bugs on Intra an enterprise level application with many monthly users. Intra is currently used by colleges, mail rooms, and by companies such as Disney and Cannon. The front end was built using React and Backbone. JS, jQuery, Javascript, CSS, and Bootstrap. The back end of the application was developed using ASP.NET, C#, and Visual Basic. Deep learning models were trained on video data to enable video cameras inside mailroom lockers to identify and differentiate QR codes and barcodes from packages placed inside the locker. To accomplish deep learning tasks we used: Python, Jupyter Notebook, MXNet, Tensorflow, Amazon Sage. Later, we used Tesseract OCR to read the packages serial number. Before performing OCR the image was processed using functions written in C#. Some of the services used devices(such as IoT buttons or the Amazon Deep Lens) that were configured and programmed using the AWS console to interact with locker systems. Created API web calls using Amazon Lambda functions that used attributes such as the devices ID, video stream, and/or button click to interact with Intra's services. We were working in an agile environment. All tasks were managed on DevOps. We had weekly sprint meetings and daily scrum meetings to prioritize our workflow. Project was built in a GIT repository which we accessed through DevOps and Git Bash. UI's were designed from images generated in Adobe XD, and sketch.
2015-10 - 2018-02	Lead Developer <i>Reality AI</i> Full Stack Developer Lead developer for RA Tools for UAV. The web application enabled engineers to train machine learning models for accelerometry data without coding. The front end was built using Angular 2.0, React, D3, jQuery, Javascript, CSS, and Bootstrap. The front end for the desktop application was created using C#, ArcObjects, Javascript, Angular 2.0, ArcMap API for Javascript, Python, ArcPy, ArcMap 10. 4/10. 5, and Arc Scene were used to develop a UI that enables GIS specialists to perform machine learning tasks on map data. The user is given a set of tools to label features on a map to train spatial machine learning models. These models could be trained and implemented on multiple layers of map data such as Lidar, Ortho. After training a model the application could automatically label and color any map data based off of the classes you trained the model on. Models are saved as a custom file(. RAI) and could later be used with the application. Machine learning services were written using C++, C#, OpenCV, and Matlab and made available on our Linux server through API services written in Node. js which allows users to process machine learning jobs and store machine learning models on the cloud. Jobs were processed on a Linux server located in

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### Education

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10/2020 - Now	Full-Stack(Engineering Immersion) <i>Thinkful</i> Refresher on JavaScript, React, Node, Postgres, JWT, Web Apps, databases
2008 - 2009	Web Development <i>NVCC Northern VA</i> Web Design, Software Development

2003 - 2007

High School

*Osbourne park High school*

Diploma

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## Web Development

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Angular 1/2/7/8, NodeJS, React, React-Native, Redux, MongoDB, Express,

TypeScript, ASP.NET, ASP.NET Core, Spring Boot, Java, Maven, Backbone.js, D3,

SQL/MySQL, SQL Server Management Studio, Django, MVC Development, Amazon Console, Amazon API Gateway, Amazon Bean Stalk, EC2, S3, Oracle, PHP

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## .NET Development

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C#, C++, C, LINQ, Visual Basic, DLL/Interop

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## Deep/Machine Learning

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Python, Tensor Flow, Scikit-Learn, MXNet, Amazon Sage, Amazon Deep Lens, MATLAB, C++, R

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## Geographic Information Systems

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## Android Development

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Android Studio, Java

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## Graphic Design / Animation

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## Video Game Development

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Unity, Unreal Engine, Maya

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## Other Skills

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Git Bash, Node Package Manager, Subversions (SVN), Jira, Dev Ops, Continuous

Delivery, Taiga, Trello, Agile Methodologies, SDLC Methodologies, Enterprise Level App Development

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## Devices

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Amazon Deep Lens, Amazon IoT buttons, Bluetooth Beacons(proximity marketing),

Bosch Box

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## References

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**Michael Collins - Reality Analytics (CTO)** number - (301) 860 - 7351 email - [Mikec@reality.ai](mailto:Mikec@reality.ai)

**Jazimyne Jacobs - SC Logic (Manager)** number - (970) 599 - 4943 email - [Jacobs@sclogic.com](mailto:Jacobs@sclogic.com)