

ChrisCapobianco

Software Developer | Researcher

contact

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summary

I am driven by curiosity and a relentless passion for problem-solving, I dive headfirst into challenges, always eager to learn and grow. My education in Astrophysics sharpened my analytical, mathematical, programming, and communication skills, which I have seamlessly carried into my 13-year career in software development. I pride myself on crafting clean, well-documented code that stands the test of time.

Throughout my career, I've tackled a diverse range of projects. At *Arctic Wolf Networks*, I played an important role in scaling their endpoint Agent from **200K** to **3.5M** deployments over four years. While at *Green Brick Labs*, I contributed to the **Bitcoin** code-base. At *Prylynx Corporation*, I built a **document classifier** for OCR text with 85% accuracy.

Outside of work, I channel my creativity into building video games, experimenting with electronics, cooking/baking, brewing mead, and exploring recreational mathematics. I also like to enter competitions, and in 2016 I entered into the **Halite AI Challenge** where I earned **Gold** tier status (top 3%) by training my bot on the strategies of the top players. I thrive on solving complex problems and am always on the lookout for the next fascinating challenge to conquer.

skills

Programming Languages (10+ years)

C/C++ 11/17, Fortran 77/90/95, Golang (6 years)

Scripting Languages (10+ years)

BASH/CSH, Python 2/3, Node.js (5 years)

Operating Systems (10+ years)

Linux/Unix (Ubuntu, Red Hat/Fedora Core, Solaris), Mac OS X 10+, Windows 7+

Software Tools (10+ years)

JIRA/Confluence, Git, Docker, OpenMP/MPI, Mathematica/Maple/Matlab,
4 years: AWS, RabbitMQ/Kafka, Grafana, GitHub Actions, VSCode

Mathematical & Algorithmic (10+ years)

Expert: Differential Equations, Regression Analysis, Monte Carlo Techniques, Code Optimization
Advanced: Object Oriented Design, Regular Expressions, Code Parallelization, Fourier Analysis

Databases (9+ years)

MySQL/MariaDB (5 years), Redis (5 years), PostgreSQL (4 years), DynamoDB (4 years)

Machine Learning (6+ years)

Keras, PyTorch, TensorFlow, Scikit-learn

Other Technical (1+ year)

MSSQL, SQLite, MongoDB, PHP 5/6

experience

2020-2024	Arctic Wolf Networks, Kitchener, Ontario <i>Software Developer, Release Manager, Cyber-Security Expert</i> <ul style="list-style-type: none">• Managed a team of five software developers• Responsible for the roll-out of AWN end-point Agent to customers in multiple regions• Contributed features and bug fixes to the AWN end-point Agent• Investigated customer issues with the AWN end-point Agent	Team Lead
2015-2020	Green Brick Labs, Kitchener, Ontario <i>Back-end Developer, Bitcoin/Blockchain Expert, Statistical Analyst</i> <ul style="list-style-type: none">• Design and build a micro-service Node.js web application for a client• Integrate financial service providers into a micro-service Golang environment• Design and build a micro-service Node.js financial service API for cryptocurrencies	Software Developer
2014-2015	Bank of Nova Scotia, Toronto, Ontario <i>Global Risk Management Model Development, Production Model Support</i> <ul style="list-style-type: none">• Consolidate execution of value at risk models in production• Identify sources of discrepancies in the source data and data conversion• Validate new models agreed with existing models	Manager
2012-2014	Prylynx Corporation, Kitchener, Ontario <i>IBM Datacap Developer, Web Developer and Machine Learning Expert</i> <ul style="list-style-type: none">• Build document capture solutions using IBM Datacap• Create document classifier using Machine Learning (SVM)• Create UI to organize scanned documents and permit corrections to classification	Research Developer

education

2006-2011	Ph.D. in Astronomy (Withdrawn) <i>Giant Planet Formation in the Outer Solar System</i>	Queen's University, Kingston, Ontario
2004-2006	M.Sc. in Astronomy <i>Secular Planetary Perturbations in Circumstellar Debris Disks</i>	St. Mary's University, Halifax, Nova Scotia
1998-2002	H. B.Sc. in Astrophysics <i>Specialist Program in Astrophysics</i>	University of Toronto, Toronto, Ontario

projects

- Building a high altitude balloon using a Raspberry Pi, an Arduino and a sensor payload
- Creating an autonomous rover using an ESP32 and environmental sensors
- Applying ML to an astro-engineering project

references

References are available upon request.