



# THOMAS HOLLIS

 Dual French/British National

[www.thomashollis.com](http://www.thomashollis.com) 

 [hollis.t@icloud.com](mailto:hollis.t@icloud.com)

[github.com/PsiPhiTheta](https://github.com/PsiPhiTheta) 

## EDUCATION

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**University of Toronto** (2018-2020) Toronto, Canada

MSc in Applied Computing (Machine Learning) - Current GPA: 4.0/4.0

Select courses: Machine Learning & Data Mining, Neural Networks & Deep Learning, Bioinformatics, Blockchain Engineering, Computational Social Science

**The University of Manchester** (2015-2018) Manchester, UK

BEng (Hons) in Electrical & Electronic Engineering - GPA: 84.3% (equivalent to 4.0/4.0, top 5%)

Select courses: Digital Systems Design II (96%), Mathematics (93%), C programming (88%)

Bachelor Thesis: Deep Learning Algorithms Applied to Blockchain-Based Financial Time Series (92%)

## WORK EXPERIENCE

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**Machine Learning Intern – Valsys** (May 2019 - December 2019) London, UK

Machine learning research placement in a fintech startup. Main research topic: "Machine Learning Forecasting Techniques For Company Financial Fundamentals In Long-Term Value Investing"

**Electronic Engineer Intern – Airbus, MBDA** (Jun-Aug 2016, Jun-Aug 2017) Stevenage, UK

Lead the summer placement team in missile electronics. Designed a comprehensive solution to power distribution architecture issues of defence systems. Details bound by the UK's Official Secrets Act (1989).

**Laboratory Researcher – Institut J. Monod, CNRS** (Spring 2014) Paris, France

Team research in surfactant dynamics of Taylor-Couette systems, data collection and scientific computing.

## PUBLICATIONS

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Fardin, M.A., Hollis, T. et. al. (2014) 'Flow instabilities in large amplitude oscillatory shear: A cautionary tale', *Rheologica Acta*, 53(12), pp. 885–898. doi: 10.1007/s00397-014-0818-7.

## SELECT PROJECTS

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**LSTM Attention** – Investigation into adding Attention to LSTMs in time series (developed, written in Python/TensorFlow)

**HFCrypto** – Innovative deep-learning trading algorithm for cryptocurrencies (in progress, written in Python/TensorFlow)

**RainCrypto** – Multi-cryptocurrency ticker system for the Windows desktop environments (developed, written in Rainmeter)

**ESP-18** – Line following racing bot using autonomous PID control and proximity sensing (built & developed, written in C)

**uClk** – Clock timer embedded system with automated luminosity and temperature sensitive alarm (developed, written in C)

## LANGUAGES & SOFTWARE

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**English** (Native - ILR level 5), **French** (Native - ILR level 5), **Spanish** (Professional - ILR level 3), **Corsican** (ILR level 1)

**Programming** Python, R, C, C++, MATLAB (Proficient); Java, HTML, UNIX/Bash, Assembly (Conversational)

**Tools & Libraries** Git, Scikit-learn, Numpy, Keras/TF, PyTorch (Predilection: Optimisation, Time Series Modelling)

## AWARDS & CERTIFICATIONS

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**Pelmorex Scholarship in Applied Computing**

Addictive Mobility, University of Toronto (2018)

**BCG Mentorship Competition Winner (top 5%)**

Boston Consulting Group (2017)

**NI Engineering Leadership Scholarship**

National Instruments (2016)

**UK National Security Clearance (SC)**

Security Vetting (Defence Business Services/MoD)

**Bachelor Thesis Project Prize (1st of 250 classmates)**

The University of Manchester (2018)

**Hackathons & Coding Competitions**

Kaggle (various), Google (2016-2019), MLH (2017)

**Accredited Engineering Technician (EngTech)**

Institution of Engineering and Technology (IET, 2017)

**First Class Army Cadet**

Royal Air Force (2015)

**Interests:** Blockchain, Machine Learning, Consciousness, Skydiving, Competitive Swimming, Baroque Piano (Grade 7)