

Andy Hayden

Pandas core developer, maths graduate and kayak coach.

Passion for finding simple and elegant solutions to complex problems,
and data-driven development.

Experience

- 2015 – *Senior Software Engineer, [Altos Research](#).*
- Full-stack: Scala/Play, Angular, Postgres, NGINX.
 - Responsible for re-vamped web product: white-labelled real estate market reports.
 - Designed and implemented the payment system (using Stripe API).
 - Devops, built out monitoring and alarms (e.g. SNS-Slack integration).
 - Automating weekly captures and simplified monitoring of processes.
 - Simplifying/containerizing majority of stack from Opsworks to Elastic Beanstalk.
 - Extensive use of AWS.
- 2014 – *Technical Consultant, Freelance.*
- 2015
- Contract software development (specializing in building data tools).
 - Teaching companies how to leverage python for data science.
 - Led workshops on git migration/best practice, and leveraging continuous testing and deployment. [Example git slides](#).
- 2013 – *Software Engineer and Data Scientist, [Awesome Decision](#).*
- 2014
- Designed and implemented machine learning in decision flows.
 - Back and front-end development using ruby-on-rails, angular, heroku, redis, and postgres.
- 2012 – *Lead Analyst and Technical Manager, [Pierce Protocols](#).*
- 2013
- Using python (pandas, numpy, scikit-learn) for data analysis of the art market.
 - Developed application for dynamic aggregations, visualisations, and estimations.
 - Responsible for refactoring and extending internal data tool/database.
 - Website technical manager of a team of six website curators for client's main site.
 - Introduced and pushed the use of bug tracking software and integration testing.
- 2008 – *Mathematics Researcher / Tutor, [Durham University](#).*
- 2011
- Researched billiards, hyperbolic geometry and Teichmueller theory.
 - Led classes. Responsible for the construction and delivery of sessions.
- 2007 *Analyst (summer placement), [Network Rail](#).*
- Recommended methods to control specific types of expenses.
- 2006 *Project Accountant (summer placement), [Network Rail](#).*
- Automated database extraction to compile reports.
 - Responsible for balancing ~300 projects' accounts in the Southeast region following migration to Oracle Projects. By end of placement this region was completely balanced.

Open Source Projects

- 2013 – *Various, including:*
- [Pandas](#) core team.
 - [Julia-lang](#) core team.
 - Authored libraries including [ctox](#), [pep8radius](#) and [pyfaker](#).

Education

- 2003 – 2007 *Master of Mathematics, First class with honours, [University of Warwick](#).
Thesis: *Lattice Stabilisers & Closed Orbits For $SL(2, R)$ Action On Translation Surfaces*.*
- 2001 – 2003 *A-levels. [Esher College](#).
Mathematics, Further Mathematics, Physics, and Chemistry.*

Self Learning

- 2012 – *[StackOverflow](#).
[Top pandas answerer](#). Over 1k answers and 5k upvotes.
80k reputation, [sportsmanship](#) and active in moderating the site.*
- 2015 – *[Coursea](#).
- Functional Programming Principles in Scala.
- Functional Program Design in Scala.*
- 2012 – 2014 *[Udacity](#).
- Design of Computer Programs.
- Software Testing.
- Programming Languages.
- Web Application Engineering.
- Programming a Robotic Car.*

Voluntary

- 2015 – Speaker at Python and Julia Meetups to audiences of up to 300 e.g.[BayPIGgies](#).
- 2012 – 2014 *[Udacity](#).
Working with other students to learn python, "got the tshirt" (for my help)!*
- 2008 – 2010 *[Junior Geometry Seminar](#) [Organiser](#), [Durham University](#).
Founded seminar, organised speakers, logistics, and directed discussion.*
- 2008 – *[Kayak Coach](#), various groups.*
- 2008 – 2011 *[Mountain Rescue Canoe Team Member](#), [Teesdale & Weardale Mountain Rescue](#).*

Other qualifications and awards

- 2012 Five Star White Water Leader (Kayak), [British Canoe Union](#).
- 2012 Coaching Processes, [British Canoe Union](#).
- 2011 John O'Groats to Land's End (cycle), [Macmillan Cancer Support](#).
- 2010 Associate of the Higher Education Academy.
- 2009 Casualty Care (First Aid), North-East Search & Rescue Association.
- 2008 Level Three Kayak Coach, [British Canoe Union](#).
- 2002 Chief Scout Award, The Scout Association.

Activities and interests

Climbing, Cycling, Hiking, Kayaking, Octopush, Running, Swimming, Woodcarving, Yoga.

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