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| PROFILE | Experienced Scala / Java / R software engineer with a Ph.D. in physics, interested in software development or research / data science roles in a global and / or remote-friendly company |
| EXPERIENCE | Software Development Engineer III | 02.2020 – Present  **Workday, Ltd.**, Dublin, Ireland  I’m currently a member of the *Scheduling* team in Workday’s *Core Services*. We use Scala, Akka, Kafka, Kubernetes, and related technologies to build and maintain a resilient, asynchronous, highly-available job scheduling engine.   * implemented actors with Akka Classic and Typed; improved system idempotency * defined and tested a complex job processing stage using the Akka Streams DSL * working effectively within a legacy codebase written in Scala, Java, and XML, squashing bugs, reimplementing over-engineered features, and solving client issues * using Gradle, Jira, LeanKit, Wavefront, Jenkins, and Confluence on a daily basis   Software Developer, Lead Software Developer | 08.2017 – 01.2020  **National Institute for Bioprocessing Research and Training** (NIBRT), Dublin, Ireland   * lead the development of a user-friendly data analytics dashboard using R Shiny * installed and maintained standalone and distributed Apache Hadoop / Spark clusters * drew insights from large biopharmaceutical datasets using custom software written in Scala, Java, and R on several OSes (Windows, macOS, Linux (Debian, Raspbian, Ubuntu)), managed with Apache Maven and GitHub / GitLab, in an Agile framework * made extensive use of bash, BSD / GNU command-line tools, regex, and git   Adjunct Professor | 01.2015 – Present  **La Salle University**, Philadelphia, PA, USA, and **Rowan University**, Glassboro, NJ, USA   * lectured in-person and online physics, astrophysics, and astronomy classes * currently teaching only online introductory astronomy at Rowan University |
| EDUCATION | IBAT College, Dublin, Ireland | 08.2018 – 01.2019  Advanced Diploma in Computer Programming (Advanced Java) Passed with Distinction  Temple University, Philadelphia, PA, USA | 08.2012 – 05.2017  Doctor of Philosophy, Physics | degree conferred 05.2017  Master of Science, Physics | degree conferred 08.2014    Moravian College, Bethlehem, PA, USA | 08.2008 – 05.2012  Bachelor of Science, Physics & Mathematics with Honors |
| SELECTED BLOG POSTS  see: [dev.to/awwsmm](https://dev.to/awwsmm/) | [101 Bash Commands and Tips for Beginners to Experts](https://dev.to/awwsmm/101-bash-commands-and-tips-for-beginners-to-experts-30je)  [273k views // 3.9k reactions // 60 comments](https://dev.to/awwsmm/101-bash-commands-and-tips-for-beginners-to-experts-30je) [ [日本語で読む](https://qiita.com/rana_kualu/items/7b62898d373901466f5c) ]  *a walkthrough of common shell commands, from the simple to the complex and unusual*  [How to Securely Store a Password in Java](https://dev.to/awwsmm/how-to-encrypt-a-password-in-java-42dh)  [59k views // 109 reactions // 18 comments](https://dev.to/awwsmm/how-to-encrypt-a-password-in-java-42dh)  *explains the differences between encryption and hashing and how to hash Strings in Java*  [What I Learned from Bombing an Amazon Coding Assessment](https://dev.to/awwsmm/what-i-learned-from-bombing-an-amazon-coding-assessment-4aom)  [46k views // 297 reactions // 37 comments](https://dev.to/awwsmm/what-i-learned-from-bombing-an-amazon-coding-assessment-4aom)  *we often learn more from our failures than we do from our successes* |
| SELECTED PUBLICATIONS & PRESENTATIONS  see: [bit.ly/awwscholar](https://bit.ly/awwscholar) | [Low-Mass Dark Matter Search with the DarkSide-50 Experiment](https://journals.aps.org/prl/abstract/10.1103/PhysRevLett.121.081307)  *[The DarkSide Collaboration](https://journals.aps.org/prl/abstract/10.1103/PhysRevLett.121.081307)* [| 23.08.2018 | Physical Review Letters](https://journals.aps.org/prl/abstract/10.1103/PhysRevLett.121.081307)  [DarkSide-20k: A 20 Tonne Two-Phase LAr TPC for Direct Dark Matter Detection…](https://link.springer.com/article/10.1140/epjp/i2018-11973-4)  *[The DarkSide Collaboration](https://link.springer.com/article/10.1140/epjp/i2018-11973-4)* [| 29.03.2018 | The European Physical Journal Plus](https://link.springer.com/article/10.1140/epjp/i2018-11973-4)  [Transverse Position Reconstruction in a Liquid Argon Time Projection Chamber using Principal Component Analysis and Multi-Dimensional Fitting](https://search.proquest.com/openview/945b664687f6a637ddf92d2f6f19e1f4/1?pq-origsite=gscholar&cbl=18750&diss=y)  [Andrew William Watson, Ph.D. Thesis | 08.2017 | ProQuest](https://search.proquest.com/openview/945b664687f6a637ddf92d2f6f19e1f4/1?pq-origsite=gscholar&cbl=18750&diss=y)  [Results from the First Use of Low Radioactivity Argon in a Dark Matter Search](https://journals.aps.org/prd/abstract/10.1103/PhysRevD.93.081101)  [The DarkSide Collaboration | 08.04.2016 | Physical Review D](https://journals.aps.org/prd/abstract/10.1103/PhysRevD.93.081101)  [Measurement of Scintillation and Ionization Yield and Scintillation Pulse Shape…](https://journals.aps.org/prd/abstract/10.1103/PhysRevD.91.092007)  [The SCENE Collaboration | 26.05.2015 | Physical Review D](https://journals.aps.org/prd/abstract/10.1103/PhysRevD.91.092007)  [First Results from the DarkSide-50 Dark Matter Experiment…](https://www.sciencedirect.com/science/article/pii/S0370269315001756)  [The DarkSide Collaboration | 09.04.2015 | Physical Letters B](https://www.sciencedirect.com/science/article/pii/S0370269315001756)  [On the Unfoldability of Prisms](https://moraviancollege.on.worldcat.org/oclc/988409816)  [Andrew William Watson, Undergraduate Thesis | 05.2012 | Moravian College Reeves Library](https://moraviancollege.on.worldcat.org/oclc/988409816) |
| OTHER INTERESTS | When I’m not programming, I like to read, particularly about science and anthropology. The books I’ve read most recently that I would recommend are *Sapiens: A Brief History of Humankind* by Yuval Noah Harari and *Nod* by Adrian Barnes.  I’ve also become a bit of an Irish Whiskey connoisseur since moving to the Republic from the United States. One of my goals is to collect a bottle from every working whiskey distillery, while touring all of the distilleries with visitor centres. |
| ON THE WEB | <https://linkedin.com/in/awwsmm>  <https://dev.to/awwsmm>  <https://github.com/awwsmm>  <https://gist.github.com/awwsmm>  <https://stackoverflow.com/users/2925434/awwsmm>  <https://bit.ly/awwscholar> |