

To be successful in machine learning, one must understand optimization, because we use optimization to train machine learning algorithms. To understand optimization requires calculus, and calculus requires algebra and trigonometry. Similarly, to understand and manipulate large datasets, we need linear algebra, which requires that you first understand basic algebraic rules and functions. Finally, because many of the machine learning algorithms output a value with a confidence level, we must understand statistics. Therefore *Math Refresher for Machine Learning* offers a comprehensive review of the concepts, approaches and applications of algebra, trigonometry, linear algebra, calculus, and statistics. This book covers each topic using a concise and practical approach with worked problems (examples) as well as exercises for the reader to complete.

This text is not intended to replace a college-level course in linear algebra, statistics, nor calculus. Rather the necessary material is provided to refresh what the reader previously learned, so that they will be ready to tackle machine learning problems and its applications in the field of Data Science.

Paul F. Roysdon holds a Ph.D. Electrical Engineering (focus in Applied Mathematics & Statistics), from the University of California, as well as an M.S. in Aeronautical Engineering, M.S. in Electrical Engineering, M.S. in Mechanical Engineering, and B.S. in Aeronautical & Mechanical Engineering. He has nearly twenty years experience in engineering and applied mathematics, solving real-world problems. He formerly worked in the private sector, with experience in aircraft design of military subsonic and supersonic unmanned vehicles, as well as software development and hardware testing of autopilots and navigation systems. He currently serves as a Chief Data Scientist at the Department of Defense.

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Paul F. Roysdon, Ph.D.

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