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Titolo	Beginning Robotics with Raspberry Pi and Arduino : Using Python and OpenCV / / by Jeff Cicolani
Pubbl/distr/stampa	Berkeley, CA : , : Apress : , : Imprint : Apress, , 2018
ISBN	9781484234624 1484234626
Edizione	[1st ed. 2018.]
Descrizione fisica	1 online resource (372 pages)
Collana	Technology in action
Disciplina	629.892
Soggetti	Computer input-output equipment Hardware and Maker
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Chapter 1: Introduction to Robotics -- Chapter 2: An Introduction to Raspberry Pi -- Chapter 3: A Crash Coarse in Python -- Chapter 4: Raspberry Pi GPIO -- Chapter 5: Raspberry Pi and Arduino -- Chapter 6: Driving Motors -- Chapter 7: Assembling the Robot -- Chapter 8: Working with Infrared Sensors -- Chapter 9: An Introduction to OpenCV -- Chapter 10: Conclusion.
Sommario/riassunto	Learn how to use a Raspberry Pi in conjunction with an Arduino to build a basic robot with advanced capabilities. Getting started in robotics does not have to be difficult. This book is an insightful and rewarding introduction to robotics and a catalyst for further directed study. You'll be led step by step through the process of building a robot that uses the power of a Linux based computer paired with the simplicity of Arduino. You’ll learn why the Raspberry Pi is a great choice for a robotics platform; its strengths as well as its shortcomings; how to overcome these limitations by implementing an Arduino; and the basics of the Python programming language as well as some of the more powerful features. With the Raspberry Pi you can give your project the power of a Linux computer, while Arduino makes interacting with sensors and motors very easy. These two boards are complimentary in their functions; where one falters the other performs admirably. The book also includes references to other great works to help further your growth in the exciting, and now accessible, field of smart robotics. As a

bonus, the final chapter of the book demonstrates the real power of the Raspberry Pi by implementing a basic vision system. Using OpenCV and a standard USB web cam, you will build a robot that can chase a ball.