

## Live Coding

## **Software Studies**

Lev Manovich and Noah Wardrip-Fruin, editors

*Expressive Processing: Digital Fictions, Computer Games, and Software Studies*, Noah Wardrip-Fruin, 2009

*Code/Space: Software and Everyday Life*, Rob Kitchin and Martin Dodge, 2011

*Programmed Visions: Software and Memory*, Wendy Hui Kyong Chun, 2011

*Speaking Code: Coding as Aesthetic and Political Expression*, Geoff Cox and Alex McLean, 2012

*10 PRINT CHR\$(205.5+RND(1)); : GOTO 10*, Nick Montfort, Patsy Baudoin, John Bell, Ian Bogost, Jeremy Douglass, Mark Marino, Michael Mateas, Casey Reas, Mark Sample, and Noah Vawter, 2012

*The Imaginary App*, Paul D. Miller and Svitlana Matviyenko, 2014

*The Stack: On Software and Sovereignty*, Benjamin H. Bratton, 2015

*Coding Literacy: How Computer Programming Is Changing Writing*, Annette Vee, 2017

*The Software Arts*, Warren Sack, 2019

*Critical Code Studies*, Mark C. Marino, 2020

*How Pac-Man Eats*, Noah Wardrip-Fruin, 2020

*Live Coding: A User's Manual*, Alan F. Blackwell, Emma Cocker, Geoff Cox, Alex McLean, and Thor Magnusson, 2022

# **Live Coding**

**A User's Manual**

**Alan F. Blackwell, Emma Cocker, Geoff Cox, Alex McLean, and Thor Magnusson**

**The MIT Press  
Cambridge, Massachusetts  
London, England**

© 2022 Massachusetts Institute of Technology

This work is subject to a Creative Commons CC-BY-SA license.

Subject to such license, all rights are reserved.



The MIT Press would like to thank the anonymous peer reviewers who provided comments on drafts of this book. The generous work of academic experts is essential for establishing the authority and quality of our publications. We acknowledge with gratitude the contributions of these otherwise uncredited readers.

This book was set in Stone Serif and Stone Sans by Westchester Publishing Services.

Library of Congress Cataloging-in-Publication Data

Names: Blackwell, Alan F., author. | Cocker, Emma, author. | Cox, Geoff, author. | McLean, Alex, 1975– author. | Magnusson, Thor, author.

Title: Live coding : a user's manual / Alan F. Blackwell, Emma Cocker, Geoff Cox, Alex McLean, and Thor Magnusson.

Description: Cambridge, Massachusetts : The MIT Press, [2022] |

Series: Software studies | Includes bibliographical references and index.

Identifiers: LCCN 2022008717 (print) | LCCN 2022008718 (ebook) |

ISBN 9780262544818 (paperback) | ISBN 9780262372626 (epub) |

ISBN 9780262372633 (pdf)

Subjects: LCSH: Computer programming—Philosophy. | Agile software development. | Creation (Literary, artistic, etc.) | Algorithms—Psychological aspects.

Classification: LCC QA76.6 .B5794 2022 (print) | LCC QA76.6 (ebook) |

DDC 005.1301—dc23/eng/20220527

LC record available at <https://lcn.loc.gov/2022008717>

LC ebook record available at <https://lcn.loc.gov/2022008718>

# Contents

List of Figures	vii
Series Foreword	xi
Acknowledgments	xiii
<b>1 Introduction to <i>Live Coding: A User's Manual</i></b>	<b>1</b>
<b>2 Partial Histories</b>	<b>13</b>
<b>3 Expositions</b>	<b>39</b>
<b>4 Notation</b>	<b>125</b>
<b>5 Live Coding's Liveness(es)</b>	<b>159</b>
<b>6 Time Criticality in Live Coding</b>	<b>181</b>
<b>7 What Does Live Coding Know?</b>	<b>205</b>
<b>8 What Does Live Coding Want?</b>	<b>229</b>
Notes	245
Bibliography	295
Index	321

