My Text in Your Handwriting

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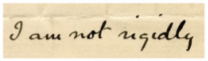
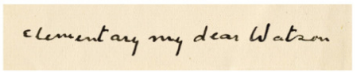
Transactions on Graphics 2016

There are many scenarios where we wish to imitate a specific author's pen-on-paper handwriting style. Rendering new text in someone's handwriting is difficult because natural handwriting is highly variable, yet follows both intentional and involuntary structure that makes a person's style self-consistent.

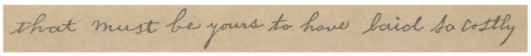
We present an algorithm that renders a desired input string in an author's handwriting. An annotated sample of the author's handwriting is required; the system is flexible enough that historical documents can usually be used with only a little extra effort. Experiments show that our glyph-centric approach, with learned parameters for spacing, line thickness, and pressure, produces novel images of handwriting that look hand-made to casual observers, even when printed on paper.

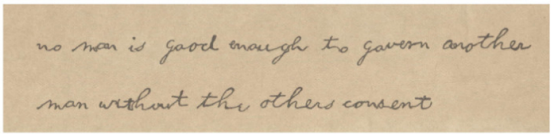
Arthur Conan Doyle

real 

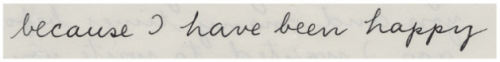
our result 

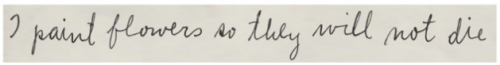
Abraham Lincoln

real 

our result 

Frida Kahlo

real 

our result 

Here we show some real handwriting samples from three famous individuals with the synthesized results of our algorithm underneath. Despite its current popularity, Doyle never wrote the Sherlock catchphrase, "elementary my dear Watson".

SIGGRAPH Slides - pptx (38Mb)

Paper - PDF (14Mb)

Paper and Supplementary Material - PDF (38.8Mb)

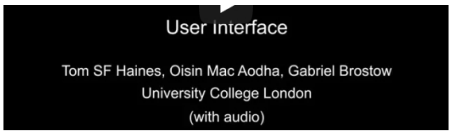
Code (link to github repo)

Handwriting samples and models - tar.bz2 (2.1Gb)

Project Guntenberg Corpus - zip (31Mb)

Random Forest Models - zip (31Mb)

Semi-Automatic Handwriting Tagging Interface

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  title        = {{My Text in Your Handwriting}},
  booktitle    = {Transactions on Graphics},
  year         = {2016},
}
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Acknowledgements

Project supported by EPSRC grants EP/J021458/1, EP/K023578/1, and CR-PLAY EU project #611089. We would like to thank Aindri, Bryan, and Melissa Terras, and the reviewers for their kind assistance.