



BRET VICTOR

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GOAL

I intend to invent software-based tools that enable people to **understand** and **create** in unprecedentedly powerful ways.

DESIGN



Apple. I designed the initial user interface concepts for iPad, iPod Nano, and half a dozen experimental hardware platforms. Initiated, designed, and prototyped over seventy concept projects, including radically reinvented interfaces for video editing, animation, drawing, learning, collaboration, mail, photos, and much more. Invented features for Mac OS X Lion. Worked with designers and engineers from all parts of Apple. Routinely presented to top-level management.



Our Choice. I designed and engineered fifteen groundbreaking interactive data graphics for Al Gore's iPad/iPhone book on climate change.

Won the Apple Design Award.

Huffington Post review: "Transforms the act of reading into something totally new... Most impressive are the charts and data, which can be played with in ways that make the info vastly more approachable than it might be in static form."



Alesis Micron. I designed and engineered this analog-modeling synth / groovebox.

Won the Consumers Digest "Best Buy" award and Keyboard Magazine's "Key Buy" award. Still a best seller after six years and two rebrandings.

Customer comments: "This is an amazing synth and I don't know what I'd do without it ... it has become one of my most loved synths, ever." "This is the best VA made to this day, no question." "It blows my mind what it is that I'm capable of doing with it." "The greatest synth of the 21st century." "Ingenious design."



BART widget. I designed and engineered this train trip scheduler with novel UI.

Won the Apple Design Award, and MacWorld's rare 5-star rating.

User comments: "WOW - I absolutely LOVE IT! Oh my god... it's the most amazing piece of widget I've seen!" "Without doubt, this widget has the most innovative interface I've seen." "Spectacular ... just about the coolest widget design ever." "This is a stunningly beautiful, functional and user-friendly widget."



ClickShirt. I designed and engineered this online design app for CafePress.

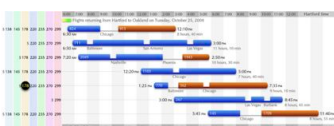
User comments: "I absolutely LOVE this website." "An amazing site and experience." "Un-friggen-believable." "Fantastic. Easiest to use tshirt designer I could find by far." "Extremely innovative and user-friendly, creative, a masterpiece." "The best website (or application) I have ever seen." "holy fucking shit. amazing."



Magic Ink: Information Software and the Graphical Interface. I wrote this 70-page paper on a revolutionary approach to UI. Includes seven extensive design examples.

Microsoft used a design from this paper for the keynote introduction of Silverlight.

Reader comments: "Pretty much the best software design paper ever written." "The only document I've read that compares with Edward Tufte." "A landmark article ... hands-down, the most important thing I've read in 24 years of software work." "This should be required reading for all UI designers and software developers." "This is some of the most amazing graphical interface redesigns I've ever seen."



Education

MS in Electrical Engineering, **University of California at Berkeley**, Berkeley, CA. (1999-2001)

Awarded EECS department full fellowship.

Thesis: *Bus Encoding to Prevent Crosstalk Delay*. I invented “self-shielding codes”, a novel technique for eliminating delay due to digital crosstalk on an on-chip bus. I provided a rigorous theoretical foundation for this class of codes, and derived their fundamental performance limits and characteristics.

Studied analog and digital integrated circuit design, A/D and D/A converter design, computer architecture, logic synthesis, CAD.

BS in Electrical Engineering, **California Institute of Technology (Caltech)**, Pasadena, CA. (1995-1999)

Graduated with **3.9 GPA and “BS with Honors”**.

Studied analog and digital circuit design, programmable logic design, VLSI design, digital signal processing, information theory, data compression, 3D graphics, complex analysis, etc.

Taught data compression, introduction to digital electronics.

Software Engineering

I have independently released over **forty software titles** over the last decade.

I have completed projects in C, C++, Objective-C, Java, Perl, Lua, JavaScript, OpenLaszlo, MATLAB, VHDL, Verilog, and half a dozen assembly languages. I am also familiar with Scheme, Haskell, Erlang, and other languages.

At Apple, I routinely implemented and iterated upon highly-polished highly-functional design prototypes in a **matter of days**, or sometimes hours.

I created and maintained a Core Animation-based **prototyping framework** used internally by several groups at Apple across hundreds of projects.

I wrote the **DSP sound synthesis engines** for three commercial pro-quality music keyboards. The Alesis Ion and Micron are award-winning analog-modeling synths. The Alesis Fusion features ultra-high-polyphony sampling, analog modeling, and FM.



I designed two **embedded operating systems** from scratch, several **compilers/assemblers**, a JavaScript framework for authoring spreadsheet-like interactive documents, a version of the lambda calculus that uses paper cut-out **alligators**...

Electrical Engineering

I managed the development of the best-selling Alesis Micron synthesizer, and did **all design and engineering**, including product specification, UI, hardware, FPGA, and firmware.

I've also made a device to crack combination locks by punching in all possible combinations
 an “air guitar”, a wireless electronic musical instrument
 a light-up trampoline that responds to how you jump on it
 an gyro-based freespace rotation sensor for mechanical engineering research
 a device for turning on an air conditioner with a phone call
 a full-custom VLSI design: a high-level graphics processor and LED matrix driver
 a computerized Coke machine

Music: Life-long piano experience. I can compose, improvise, and sight-read from fakebooks. I have played with a band, and recorded a CD in the studio.

Improv: On-stage experience performing improvised sketches and songs.

Writing: In particular, creative use of language and wordplay.