Joel Gustafson

joelg@mit.edu | joelgustafson.com

Motivation

I want to make computing universally accessible as a medium and an art. I believe in direct manipulation of data, augmenting human intellect, and dynamic, interactive documents, unlike this one.

Education

Massachusetts Institute of Technology — 2014–

Class of 2018 | Math with Computer Science

Coursework in algebra, algorithms, complexity, compilers, cryptography, artificial intelligence, symbolic programming, fabrication, and magic

Experience

MIT Media Lab — 2015

Designed and implemented a novel network architecture for an open academic publishing platform to track attribution and trace diffusion of ideas

MIT Computer Science and Artificial Intelligence Lab — 2016

Worked with Professors Gerry Sussman and Jack Wisdom to build a Scheme programming environment in the browser for a computational physics class

Notion Labs, Inc. — 2017

Wrote a domain-specific language and designed an editor for querying and computing on structured data for a zany new productivity and organization tool

Skills

Languages	Software	Interests	Heroes	Fun
TypeScript	React, Polymer	AI, NLP	Alan Kay	Tennis
Scheme	D3, Three.js	UI, HCI	Ted Nelson	Nature
Python	Node, Webpack	VR, AR	Ivan Sutherland	Debate
Rust, C	IPFS, Ethereum	FHE, SMC	Doug Engelbart	Card games
Java, Scala	Emacs, Unix, Git	Acronyms	Bret Victor	Magic

Projects

GRASP: a 3D graphical dataflow visualization for Lisp

Visual History: a chrome extension that delinearizes the browser's back & forward stack by visualizing walks on the internet graph as trees of history nodes

MIT Scheme Kernel: the MIT Scheme kernel for Jupyter notebooks

Prototypical: a decentralized hierarchical note-taking application built on IPFS

Brainfreeze: a fully homomorphic compiler and runtime for the Brainfuck language