

Malcolm Groves

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[GitHub](#) • [LinkedIn](#) • [Portfolio](#)

PROJECTS

Handwritten Digit Recognition (C++)

[GitHub](#)

A nature-inspired genetic algorithm / neural network hybrid

- Achieves >93% accuracy after compressing images to 32-symbol strings.
- Outperforms a simple neural network by >10% with ¼ the number of nodes.

JOHN (Ruby on Rails, JavaScript)

[Live](#) • [GitHub](#)

Crowd-sourced restroom locator

- Responsive single-page web application with JavaScript front-end served by API requests to rails back-end.
- Searches geindexed database for bathrooms using device geolocation.

Buck Tagger (Ruby on Rails, Javascript)

[Live](#) • [GitHub](#)

The social network for hunters

- Implements Google Maps API and Google Geocoding API to georeference posts and display maps.
- Generates geospatial statistics for deer hunts.

Languages: Java, C++, JavaScript, HTML, CSS, SQL, Python, MatLab

Frameworks & Technologies: Rails, git, AJAX, jQuery, ReactJS, Sinatra

EXPERIENCE

Dublin School (Chemistry Teacher, Coach)

Sept 2017 - Present

- Collaborated with STEM faculty to design a curriculum that incorporated technology into labs and projects.

Bowdoin College (Student Researcher)

Jan 2016 - May 2017

- Presented first known characterization of excited-state proton-transfer kinetics of 8N2OH at National ACS Conference in San Francisco.
- Developed MatLab programs for results visualization, signal deconvolution, and regression analysis of steady-state systems.

EDUCATION

Bowdoin College (B.A. in Chemistry)

GPA: 3.84 / 4.00

- Phi Beta Kappa, Dean's List (2014-17)
- Nordic Ski Team: Captain 2015-16 & 2016-17, Top male Bowdoin skier 2016-2017, Academic All-American (2014-17)

INTERESTS

- Current [record](#) holder on the 18 mile NH Presi Traverse
- Climbed the 67 peaks above 4000 feet in New England
- Snow sports, chopping wood, camping