

# Industry Academic Interaction: A Small Business Perspective

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[www.natural-selection.com](http://www.natural-selection.com)

# History: Natural Selection, Inc.

- Founded in 1993; San Diego, CA
- Recognized award winning pioneer in “bio-inspired” computing
- Mission: Solve real-world problems in industry, medicine, and defense



# Application Areas

- Government

- Optimized scheduling
- Screening
- Routing
- Pattern classification
- Pattern discovery
- Anomaly detection
- Sensor fusion

- Industry

- Biomedicine
- Transportation
- Gaming
- Sensing
- Routing
- Finance
- Energy optimization

# New Hires

- Usually hired for general programming skills, with specific knowledge in machine learning
- Train programmers in aspects of problem space (biology, industry, defense)

# Productive Employees

- Think independently
- Adhere to a schedule to complete a project
- Self-motivated to excel
- “Outside the box” solutions
- Diverse interests and ability to hop between projects easily

# Academic Skills

- Opportunities for “outside the box” thinking
- Core competency in programming with general knowledge competency in broader areas of science and technology
- Communication/presentation skills mandatory
- Open mindedness to new ideas and ways of problem solving

# Does Industry Mean “Leaving” Academia?

- Industry leaders need to volunteer in community-based science organizations
- Helping to review for journals and conferences
- Remaining educated on latest developments in science
- Forging improved academic-industry relationships