BRIAN HUNGERMAN

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CHRONICLE OF
WORKS & WISDOM

SENIOR SOFTWARE ENGINEER

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MICROSOFT

APOSTLE'S PREFACE

Brian Hungerman, *Senior Software Engineer* at *Microsoft Applied Sciences*, incubates novel *A.I.* user experiences with collaboration across *W+D*, *MSR* & *ID*, developing full-stack functional prototypes across web & mobile platforms.

Previously, he shipped *Online Endpoints* to 50+ regions for *Azure OpenAI*, *Copilot*, *Office* & third-parties, scaling cloud infrastructure to serve trillions of inferences per month with six nines of *SLA*.

He holds a *Bachelor of Science* in *Computer Science & Engineering* from the *University of California, Merced*, *magna cum laude*.

> *"Mortality is merely a door, not a wall!"*
> — *Clavileño, First Of The Blesséd*

"Code mobilized, code gamified..."
— *Brian Hungerman, typically*

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Dark Tutelage

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What follows is a compilation of professional experience, research, education, skills, projects & awards.

EXPERIENCE

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*What follows is a compilation of professional works;
here-in re-counting the labors undertaken in service of
Microsoft and others.*

APPLIED SCIENCES

SENIOR SOFTWARE ENGINEER @ MICROSOFT
January 2025 — Present

Incubating novel *A.I.* user experiences with collaboration across *W+D*, *MSR* & *ID*; developing full-stack functional prototypes across web & mobile platforms.

The *Applied Sciences* group is the advanced prototyping arm of *Microsoft*, where research meets product in the pursuit of what comes next....

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A.I. PLATFORM

SOFTWARE ENGINEER @ MICROSOFT
January 2020 — January 2025

hipped *Online Endpoints* to 50+ regions for *Azure OpenAI*, *Copilot*, *Office* & third-parties; scaled cloud infrastructure to serve trillions of inferences per month with six nines of *SLA*.

ptimized *Network Address Translation* to reduce *COGS* by $10 million per year; a feat of frugal engineering that echoed through the ledgers of *Azure*....

ompleted security, privacy & component governance audits as *Security Champion*; spearheaded livesite process improvements via *TSGs* & *SOPs* as *DRI Champion*.

mplemented *Envoy Proxy* build pipeline with *Bazel* & custom *C++* filters, among them:

- *SHA-256 Key-Based Authentication* filter with *CORS* preflight support
- *Azure Active Directory* authentication filter with *LRU* decision cache
- *Global Rate Limiting* filter with *Go* microservice to pub/sub to *Redis* cache

et up runners & telemetry pipelines in *Azure Data Explorer*, *Kusto* & *SQL*; shipped *PowerBI* & *Grafana* dashboards to track platform metrics & logs.

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THE INTERNSHIPS

SOFTWARE ENGINEER INTERN @ A.I. PLATFORM, MICROSOFT
May 2019 — August 2019

Designed *Jupyter* notebook *CI* pipeline with *Azure DevOps*, *ML SDK* & *Azure Functions*; thus was the seed of automation sown....

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SOFTWARE ENGINEER INTERN @ VENTANA, ROCHE
May 2018 — December 2018

Pushed feature-adds & bug-fixes for *MEAN* stack digital pathology web application; prototyped *OpenSeaDragon*-esque image renderer & annotator in *Pixi.JS*.

Modernized *Nagios* server monitoring with *Icinga*, *Graphite* & *Grafana*; watch-fires re-kindled for a new age of observability....

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LEADERSHIP

DIRECTOR @ HACKMERCED IV, MAJOR LEAGUE HACK-ING
May 2018 — May 2019

osted non-profit collegiate hackathon for 300 students, fundraising $20,000! A congregation of builders, summoned to create....

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WEB DEVELOPER @ CITRIS & BANATAO INSTITUTE, UCM
May 2017 — December 2018

eveloped *GitOps* content management system via *jQuery* & *CSV* files to replace *Drupal CMS*, hosting via *GitHub Pages*: https://citris.ucmerced.edu.

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INSTRUCTOR @ SUMMER OF GAME DESIGN, MVHS
June 2015 — July 2016

o-founded non-profit game programming summer camp, fundraising $25,000! The youth were taught the ancient craft of *Unity3D*....

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"... so it is written in Code; so it shall compile..."

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RESEARCH & EDUCATION

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*What follows is a compilation of scholarly works;
here-in re-counting the studies & discoveries made in
the laboratories & lecture halls of UC Merced.*

THE UNIVERSITY

BACHELOR OF SCIENCE @ UNIVERSITY OF CALIFORNIA,
MERCED
August 2016 — December 2019

omputer Science & Engineering, *magna cum laude*
(GPA 3.74); a foundation forged in algorithms &
proofs....

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The Laboratories

Lead Research Assistant @ Vice Lab, UCM
August 2018 — December 2019

Led team to develop heuristic & *ML* scripts in *Google Earth Engine* to model & predict California's agricultural fallowing via Earth observation satellite data.

Onboarded lab to *GitHub* & wrote open-sourced scripts in *Python, C# & R*; refurbished lab's website, hosting via *GitHub Pages*: https://vicelab.net.

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Research Assistant @ Andes Lab, UCM
January 2019 — May 2019

Visualized *InfluxDB* data for *HVAC* predictive control system in *Python & Grafana*; charting the unseen currents of climate....

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Research Assistant @ SAIL + MACES, UCM & NASA MUREP
August 2017 — May 2018

Debugged code to 3D-print *Fermi* surfaces via *March-*

ing Cubes in *Fortran90*; giving physical form to quantum abstraction....

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"... so it is written in Code; so it shall compile..."

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SKILLS

The tools & tongues mastered over the years.

Languages: *C / C++ / C#* (8 years); *Python* (6 years); *JavaScript / TypeScript* (4 years); *Golang / Rust* (2 years); *Java / Kotlin* (2 years).

Frame-works: *Azure / .NET* (6 years); *MEAN / MERN* (2 years); *LAMP / Drupal* (2 years).

Programs: *Unity3D* (8 years); *Docker / Kubernetes* (4 years); *Android Studio* (2 years).

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PROJECTS

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Personal works, forged in spare hours & sleepless nights.

Iterate — *"Code Mobilized"*: a vessel for learning to code on the go.

Bit-Naughts — *"Code Gamified"*: a vessel for learning to code through play.

MARP — *"..."*: a vessel yet un-named, its purpose yet un-revealed....

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AWARDS

Honors bestowed upon the worthy.

Microsoft Hackathon
HackADuo Finalist

ValleyHacks
First Place

SLOHacks
Best Google Cloud

Mobile App Challenge
$2,000 Finalist Prize

CitrusHack
Third Place

SDHacks

Third Place

SacHacks
Second Place

HackDavis
Best Environment

HackFresno
Best Hardware

Mobile App Challenge
$5,000 Grand Prize

HackMerced
Best Design

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"... so it is written in Code; so it shall compile..."