

Ethan David Magalei

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EDUCATION

- 2023–2028 **Stanford University**, B.S. Earth and Planetary Sciences, minors in Physics and Mathematics (expected). Coursework includes geophysical mechanics and dynamics, introductory seismology, planet formation, geobiology, and introductory geology; the physics majors' sequence (mechanics and special relativity, quantum and thermal physics, E&M) with labs; multivariable calculus, differential equations, and proofs; and CS 106A. First year in ITALIC, Stanford's residential arts program: a rigorous, wide-ranging arts education.
- 2023 **Wasatch High School**, Heber City, Utah. AP Scholar with Distinction.

RESEARCH

- 2023–present **Radio Glaciology Lab**, Stanford Doerr School of Sustainability. Advisor: Dustin Schroeder. Design and run lab analog experiments on how brine trapped in Europa's ice shell changes radar propagation, to help the REASON radar on NASA's Europa Clipper see inside the ice. Dielectric measurements with a FieldFox VNA (parallel-plate and transmission-line methods). Project led by Natalie Wolfenbarger, now by Annie Cheng.
- 2025 **Astrophysics research**, Kavli Institute for Particle Astrophysics and Cosmology (KIPAC). Mentor: Maya Beznay. Reduced and analyzed optical spectra of millisecond-pulsar binaries from the 4.1 m SOAR telescope, using IRAF/PyRAF and Python.
- 2022–2023 **Student ecologist, drone specialist, and ecology team lead**, Utah DNR internship through Wasatch CAPS. Designed the drone-survey and transect protocols for the team's ecological fieldwork and led the student ecology team.

TEACHING

- 2025–present **Founder and tutor**, Tutoring with Ethan David Scott. Math through Calculus 2, physics through E&M, chemistry, and the ACT, for middle school through adult learners. Built the practice from scratch and run all of it: clients, scheduling, billing, the website, and a YouTube channel of explainers.
- 2024 **Stanford Spokes**. Selected as one of six cyclist-educators for a 3,500-mile ride from San Francisco to Washington, D.C. Built a Star Trek–style physics escape room in the first week and ran it as a workshop at almost every stop, in under-resourced communities along the way.
- Science outreach**. Taught pulsar astrophysics to middle and high school students through Stanford Splash; physics outreach with the Stanford University Physics Society.
- 2025–2026 **Substitute teacher**, Wasatch County schools, Utah (through Kelly Education).

WORK

- 2026 **Mountain bike instructor**, Stanford Sierra Camp, Fallen Leaf Lake, California. Led mountain bike rides for families and guests; also lifeguard and waterfront staff.
- 2017–2026 **Host, actor, and storyteller**, Heber Valley Historic Railroad. Brought the valley's history to life for passengers, in character and as a storyteller.

THEATRE, WRITING & PRODUCTION

- 2023 **Lighting designer**, Stanford Gaieties, Ram's Head Theatrical Society's annual student-written musical.
- 2022, 2025 *The Girl in the Yellow Dress*, co-written with Tal Hughes. Premiered at Timpanogos Valley Theatre in 2022; brought back in 2025 as a revised production covered by KSL, KPCW, and the Park Record. Stage manager and sound designer for the revival.
- 2022–2024 **Playwright and licensing manager**, Yellow Dress Productions. Licensed and promoted our work and mentored young playwrights in the Heber Valley.
- At Stanford, Fyodor Kulygin in *Three Sisters* and Neleus in *Mary Poppins* (Stanford Light Opera Company, 2024); 25+ community and school productions; lighting design at Timpanogos Valley Theatre.

HONORS

- Stanford Scholarship; L'Heureux Family Scholar; Delta Scholar; Elks Scholar
- 2020 Eagle Scout, Gold Palm
- 2022 Utah Science Olympiad, Trajectory state champion
- 2023 National Association of Teachers of Singing (NATS), Cal Western region auditions: 2nd place (after 1st place in the classical high school division, 2021)

SKILLS & ACTIVITIES

- Technical Python (NumPy, SciPy, Matplotlib, Astropy), IRAF/PyRAF spectral reduction, VNA dielectric measurement, soldering and fabrication (Lab64), drone surveying, sound and lighting design.
- Languages Spanish, German, and Samoan (currently studying).
- Activities Stanford Band; Stanford Triathlon Team; founder and president, Kepler Science Club (Wasatch High); flight training toward a private pilot license.