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1. Install Python
2. Introductory Astrophysics
   1. Astronomical units
      1. Angles
         1. RA and Dec
         2. Degree, arc minute, arc second
      2. Distance
         1. Light year
         2. AU
         3. 1 AU subtends 1 arc second -> Parsec
   2. Light
      1. Speed of light
      2. Light as a wave (and particle)
      3. Electromagnetic spectrum
         1. Wavelength and frequency
         2. Color (might be outside visible spectrum), energy level (Photoelectric effect)
      4. Spectroscopy
   3. Stars
      1. Thermonuclear fusion, TDE
      2. Stellar evolution
         1. Stellar nebula -> star -> fusion -> white dwarf/planetary nebula OR supernova/neutron star OR supernova/black hole
   4. Galaxies
      1. Milky Way
         1. 100 - 180,000 light years
         2. 100 - 400 billion stars
         3. Where we are, what our orbit’s like
      2. Center of galaxies...AGN
   5. Cosmology
      1. Big Bang
      2. CMB
      3. “Shape” of universe
         1. Inflation
      4. Fate of the universe
         1. Depends on relative densities of matter, radiation, and cosmological constant
         2. Dark matter
         3. Dark energy
3. Intro to Python Jupyter Notebook
4. Hubble Diagram Jupyter Notebook
5. (if time) Graphing galaxies’ 3D positions