Table S1, Related to Figure 2C. Correlation values (with 95% confidence interval) between the Pelli-Robson contrast sensitivity and the thickness of retinal layers at different retinal eccentricities. Correlation values higher than 0.3 (p-values < 0.001) are highlighted in red.

| Retinal eccentricities (mm) | -2.5--2 | -2--1.5 | -1.5--1 | -1--0.5 | -0.5--0.5 | 0.5--1 | 1--1.5 | 1.5--2 | 2--2.5 |
|-----------------------------|---------|---------|---------|---------|---------|-------|-------|-------|-------|
| **RNFL**                    |         |         |         |         |         |       |       |       |       |
| 0.25                        | 0.24    | 0.23    | 0.01    | 0.06    | 0.04    | 0.07  | 0.29  | 0.35  |
| [0.15,0.34]                 | [0.15,0.34] | [0.14,0.32] | [0.09,0.11] | [0.04,0.16] | [0.03,0.16] | [0.03,0.16] | [0.19,0.37] | [0.26,0.43] |
| (p <0.001)                  | (p <0.001) | (p <0.001) | (p <0.01) | (p <0.25) | (p <0.01) | (p <0.01) | (p <0.01) | (p <0.01) |
| **GCL**                     | 0.35    | 0.41    | 0.41    | 0.09    | 0.40    | 0.58  | 0.51  | 0.39  |
| [0.26,0.44]                 | [0.33,0.49] | [0.39,0.54] | [0.32,0.49] | [0.32,0.48] | [0.51,0.64] | [0.44,0.58] | [0.30,0.47] |
| (p <0.001)                  | (p <0.001) | (p <0.001) | (p <0.001) | (p <0.001) | (p <0.001) | (p <0.001) | (p <0.001) |
| **IPL**                     | 0.39    | 0.36    | 0.34    | 0.31    | 0.34    | 0.43  | 0.37  | 0.26  |
| [0.30,0.47]                 | [0.27,0.44] | [0.25,0.42] | [0.21,0.39] | [0.08,0.28] | [0.25,0.43] | [0.35,0.51] | [0.28,0.46] | [0.17,0.35] |
| (p <0.001)                  | (p <0.001) | (p <0.001) | (p <0.001) | (p <0.001) | (p <0.001) | (p <0.001) | (p <0.001) |
| **OPL**                     | 0.10    | 0.04    | 0.05    | 0.09    | 0.14    | 0.16  | 0.19  | 0.24  | 0.18  |
| [0.09,0.19]                 | [0.06,0.14] | [0.05,0.15] | [0.01,0.18] | [0.04,0.24] | [0.06,0.25] | [0.09,0.29] | [0.15,0.33] | [0.08,0.27] |
| (p =0.07)                  | (p =0.46) | (p =0.32) | (p =0.11) | (p =0.01) | (p =0.01) | (p =0.01) | (p =0.001) | (p <0.001) |
| **INL**                     | 0.11    | 0.16    | 0.06    | 0.05    | 0.01    | 0.08  | 0.15  | 0.14  | 0.12  |
| [0.01,0.20]                 | [0.06,0.25] | [0.04,0.16] | [0.05,0.14] | [0.09,0.11] | [0.02,0.18] | [0.05,0.28] | [0.04,0.23] | [0.12,0.22] |
| (p =0.05)                  | (p =0.11) | (p =0.40) | (p =0.82) | (p =0.14) | (p =0.01) | (p <0.01) | (p <0.01) | (p <0.01) |
| **ONL**                     | 0.01    | 0.03    | 0.11    | 0.12    | 0.05    | 0.06  | 0.04  | 0.02  | 0.05  |
| [-0.09,0.10]                | [-0.07,0.13] | [-0.02,0.21] | [-0.05,0.15] | [-0.04,0.16] | [-0.06,0.14] | [-0.08,0.12] | [-0.05,0.15] | [-0.05,0.15] |
| (p =0.93)                  | (p =0.54) | (p =0.05) | (p =0.35) | (p =0.24) | (p =0.46) | (p =0.71) | (p =0.37) |
| **PR**                      | 0.18    | 0.19    | 0.19    | 0.12    | 0.10    | 0.14  | 0.16  | 0.16  |
| [0.08,0.27]                 | [0.09,0.28] | [0.10,0.29] | [0.06,0.25] | [0.02,0.21] | [0.04,0.24] | [0.06,0.26] | [0.06,0.26] |
| (p <0.001)                 | (p <0.001) | (p <0.001) | (p <0.001) | (p <0.001) | (p <0.001) | (p <0.001) | (p <0.001) |
| **RPE**                     | 0.18    | 0.20    | 0.14    | 0.14    | 0.12    | 0.11  | 0.17  | 0.20  | 0.16  |
| [0.09,0.28]                 | [0.11,0.30] | [0.04,0.24] | [0.06,0.23] | [0.02,0.22] | [0.01,0.02] | [0.07,0.26] | [0.10,0.29] | [0.06,0.25] |
| (p <0.001)                 | (p <0.001) | (p <0.001) | (p <0.001) | (p <0.001) | (p <0.001) | (p <0.001) | (p <0.001) | (p <0.001) |

Table S2, Related to Figure 3. $R^2$ values (95% confidence interval) for different trained models.

| Model | 1 | 2 | 3 | 4 | 5 |
|-------|---|---|---|---|---|
| $R^2$ (95% CI) | 0.40 [0.15,0.60] | 0.30 [0.04,0.52] | 0.49 [0.26, 0.66] | 0.40 [0.15,0.59] | 0.23 [0.04,0.46] |
| (p < 0.001) | (p < 0.001) | (p < 0.001) | (p < 0.001) | (p < 0.001) | (p < 0.001) |